

UNITED STATES NAVY Medical News Letter

Vol. 44

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TABLE OF CONTENTS

SPECIAL FEATURES

A Message from the Surgeon General -----	1
The National Naval Medical Center -----	2

MEDICAL ABSTRACTS

History Taking in Urology -----	4
Psychosomatic Diagnosis -----	7

MISCELLANY

Active Duty Medical Officers in Private Practice -----	10
HM1 Strack Honored -----	11
ADM Kreuz to Host Navy Party -----	11
Applications for Inservice Residency Training -----	11
Oak Knoll Trains Civilian Nurses -----	11
Certification Program for Biophotographers -----	12
Safety Message -----	12

FROM THE NOTE BOOK

Pharmaceutical Seminar Program -----	13
Residency Program in Thoracic Surgery -----	13
Meeting of ACS -----	13
USNRDL Scientist Invited to Europe -----	13

DENTAL SECTION

Lymphadenopathy and Submaxillary Salivary Gland Pathology -----	14
Manual and Power Toothbrushes -----	14
Fluoridation Values in Adults -----	15
Contamination in Dental Mercury -----	16
Periodontal Disease and Prevention -----	16
Professional Notes -----	17

PREVENTIVE MEDICINE

Animal Salmonellosis -----	19
Antimony Poisoning-Illinois -----	20
Anopheles Balabacensis in Cambodia -----	20
Extracting Scorpion Venom -----	20
Rocky Mountain Spotted Fever, Virginia -----	21
Know Your World -----	21
Warning About Tularemia -----	22
Water Treatment Processes -----	23
U.S. President Pledges Support for Tuberculosis Work -----	23
Treatment of Rabies Infected Wounds -----	23

RESERVE SECTION

ACDUTRA Orders Standardized -----	25
New Hospital Corps Division -----	25
American College of Surgeons -----	25
BUMED INST. 1001.1B -----	25

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United States Navy
MEDICAL NEWS LETTER

Vol. 44

Friday, 18 September 1964

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Policy

The U.S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be, nor are they, sus-

ceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

Change of Address

Please forward changes of address for the News Letter to: Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland 20014, giving full name, rank, corps, and old and new addresses.

FRONT COVER: This is perhaps the most widely known view of the main tower and adjoining buildings of the National Naval Medical Center. It is an official U.S. Navy Photograph taken by Mr. John Stringer, Head of the Medical Photography Laboratory, U.S. Naval Medical School, NNMC, Bethesda, Maryland 20014.

The issuance of this publication approved by the Secretary of the Navy on 4 May 1964.

U.S. NAVY MEDICAL NEWS LETTER



THE SURGEON GENERAL OF THE NAVY
WASHINGTON

SEP 23 1964

A MESSAGE TO ALL MEDICAL DEPARTMENT PERSONNEL

Introducing the New Format of the U.S. Navy Medical News Letter

The first issue of our Medical News Letter was distributed to Medical Department personnel around the World on 5 March 1943. It was conceived as a periodical publication designed to invite the attention of Regular and Reserve personnel of all ranks and rates, to timely and important items of official and professional interest relative to the field of medicine and its allied sciences. It has been published without interruption since that date, including the periods of our major engagements of World War II and the Korean Conflict. Being remote from adequate medical libraries, our medical and allied sciences personnel serving with the combatant forces were in dire need of "keeping up" with progress at home in their respective fields. It has never been intended or assumed that the material published in the Medical News Letter would be a worthy substitute for original contributions to the medical and paramedical literature. It is an "in-house" or intramural periodical which covers U.S. Naval medical affairs and current medical literature. The quality of the contents is directly proportional to the devoted interest and contributions of each and every person in the Medical Department of the U.S. Navy.

From 1907 to 1949, the U.S. NAVAL MEDICAL BULLETIN was published continuously, and this Bureau enjoyed considerable prestige as a consequence of its excellent format and coverage of salient military medical progress of the times,—contributed, almost without exception, by far-seeing and astute medical officers of the U. S. Navy. Today, scarcely a week passes in BUMED without multiple requests for reprints of articles or copies of that publication pertaining to pin-pointed problems, especially those related to tropical medicine. I would like to revive some of the Bulletin's features in our new Medical News Letter.

With this new format, it is my fond hope and desire, (as well as my open invitation), that more of our accomplished personnel will take pen in hand to compose significant medical news items or professional articles for publication in this medium. It is well to remember that your word will be passed along to at least 15,000 to 20,000 persons in the CONUS and abroad. In another frame of reference, let others benefit from your experiences.

It is a pleasure to report that this new format is a direct result of the far-sighted initiative and planning of key personnel of the U.S. Navy Publications and Printing Service, Mr. A. N. Spence, Director, and his staff assistants Mr. Richard Furbush, Mr. Jack Richey and Mrs. Addie Wilson. In BuMed, I would like to express appreciation to the following personnel for their unwavering devotion to the perpetuation and improvement of the Medical News Letter: Captains M. W. Arnold (Editor), C. E. Wilbur (AVN Med), J. W. Millar (Preventive Med); K. W. Schenck (U.S. Naval Reserve), and C. A. Ostrom (Dental); CDR N. E. Rosenwinkel (Occupational Med), and CDR J. H. Schulte (Radiation Med and Submarine Med); Mr. William Kline (Managing Editor), and Mrs. Patricia Caballero and Miss Virginia Morvay, Assistants to Captain Arnold.

The United States Navy Medical News Letter is YOUR publication. Let us see to it that you are an integral and contributing component of it.

E. C. KENNEY
Surgeon General
Rear Admiral MC USN

A Report on the National Naval Medical Center, Bethesda, Maryland

Submitted by RADM Calvin B. Galloway MC USN, Commanding Officer

GENERAL

The National Naval Medical Center was first established in 1935 and consisted of the Naval Hospital, and the Naval Medical School located at 23rd and E Streets, N.W., Washington, D. C., the present site of the Bureau of Medicine and Surgery. In 1938 money was appropriated for the acquisition of land in the District of Columbia, or the vicinity thereof, for the building of a new Naval Medical Center. The site, selected from among 80 others inspected, consists of 242.4 acres located approximately one mile north of Bethesda, Md., on Rockville Pike (U.S. Route 240), opposite the National Institutes of Health.

The site of the National Naval Medical Center is on one of the earliest grants of land in the Bethesda area. Originally known as "Leeke Forest," the land now occupied by the Center was part of a 710 acre tract of land surveyed for Colonel Henry Dulaney in 1688. It was also called "Darnall's Forest" when Colonel Henry Darnall secured a grant of 712 acres on November 12, 1694. Colonel Henry Dulaney and Colonel Henry Darnall were owners of large tracts of land and holders of extensive "patents" on land throughout Maryland. Portions of the original "Leeke Forest" were later granted to Andrew Hughs and to Henry Leek, who had 185 acres of "Leek's Lot" surveyed, and secured a patent for the 185 acres on March 28, 1747.

GROUNDBREAKING

The contracts for the construction of the Center were awarded and ground was broken with appropriate ceremonies on June 29, 1939. Actual construction was started soon thereafter. The cornerstone was laid on Armistice Day, 1940, by President Franklin Delano Roosevelt in the presence of the Secretary of the Navy and his staff, the chiefs of the various bureaus of the Navy Department, the Surgeons General of the Army and Public Health Service, and many other distinguished guests, including members of Congress and of the medical profession.

COMMISSIONING

The newly constructed Medical Center was officially commissioned February 5, 1942, and the medical facilities thereat established by the Secretary of the Navy as the National Naval Medical Center, Bethesda, Md. On August 31, 1942, it was dedicated by President Roosevelt, which occasion also commemorated the 100th anniversary of the Bureau of Medicine and Surgery.

ARCHITECTURE

The buildings are of structural steel, faced with pre-cast-exposed aggregate concrete panels. At a distance the dark spandrels, vertically situated between the windows, serve to give the main building the appearance of having lofty square columns. The style is monumental, and its balanced beauty gives the observer a sense of quietness and repose. Various-colored terra cotta is extensively used in the interior corridors and rooms with a most harmonious effect. The lobby walls are of Vermont marble in three colors trimmed with white bronze.

The tower of the administration building, which is on a bluff facing Rockville Pike, dominates the landscape for many miles in all directions. It rises 558 feet above "Rockville Pike," and is devoted to wards and sick rooms.

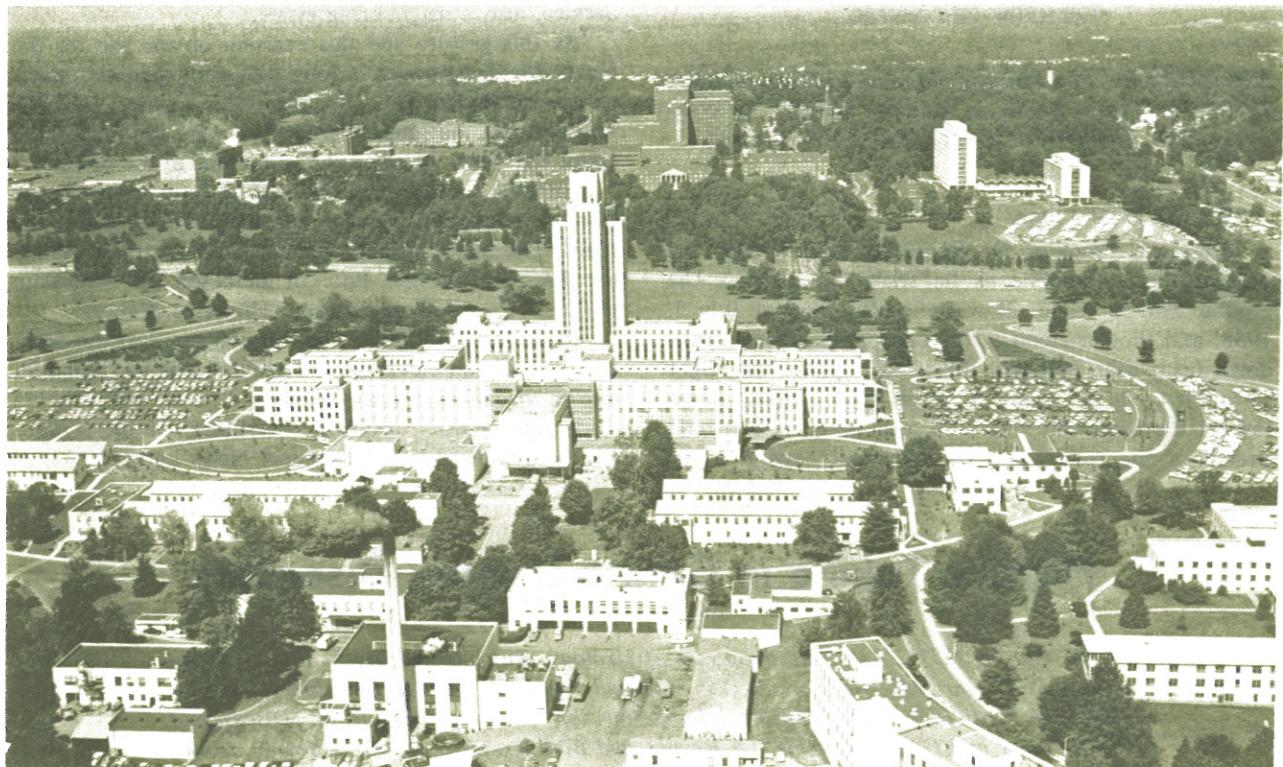
A "carillon" system broadcasts chimes and recorded programs daily through a battery of powerful amplifiers mounted on the tower roof. Under normal atmospheric conditions, the tones carry clearly over a range of two miles in every direction. A ship's clock, operating on this system, automatically strikes "ship's bells" on the hour and half-hour from seven a.m. to nine p.m. daily.

The administration building has a west frontage of approximately 362 feet and is bounded on the north and south by three-story wings which extend from the building to a distance of about 158 feet. The tower floors are in the shape of a Geneva Cross, the greatest length being approximately 106 feet.

The Medical Center consists of a central group of buildings housing the administrative offices, laboratories, classrooms, a surgical pavilion, two ward buildings, a dining hall and food-preparation area, and an auditorium with a seating capacity of about 550.

LANDSCAPING

The landscaping is accomplished with trees native to this section of the country, such as oaks, elms, sycamores and magnolias. A nine-hole golf course encircles the buildings. The golf course adds to the natural contour and beauty of the grounds, and provides a popular outdoor recreation facility for patients and staff. There is a small artificial lake fed by natural springs, located directly beneath the tower and in the center of the front lawn which has been popularly called Lake Eleanor in honor of the first lady of the land at the time the Center was built and commissioned. In addition, an artificial lake and recreation area were developed in the wooded area in the eastern portion of the reservation



BACK VIEW OF NNMC, SHOWING NEW CONSTRUCTION
Official U.S. Navy Photograph by Mr. John Stringer, U.S. Naval Medical School

in 1954. The lake and recreation area, named in honor of Rear Admiral L. O. Stone MC USN, former Commanding Officer of the Center, has facilities for wading, boating and fishing. The adjacent recreation area is equipped with picnic tables, barbecue pits and benches. This beautiful recreation area is the setting for the annual Easter Sunrise Services sponsored jointly by the Bethesda Council of Churches and the National Naval Medical Center. Sponsorship of the Easter Services by the Bethesda Council of Churches began in 1947 with services being held directly in front of the main building. However, the setting of lofty pine trees, mirrored in the clear waters of the lake, conveyed the impression of a lofty cathedral, and woood planners of the event to this inspiring location.

COMMAND CHARACTERISTICS

The National Naval Medical Center is commanded by an officer of the Medical Corps, who exercises military and management control over the following activities: U.S. Naval Hospital; U.S. Naval Medical School; U.S. Naval Medical Research Institute; U.S. Naval

Dental School; U.S. Naval School of Hospital Administration; U.S. Navy Toxicology Unit, and the Armed Forces Radiobiology Research Institute. These component activities, with the exception of the Armed Forces Radiobiology Research Institute, are commanded by senior officers of the Medical, Dental, and Medical Service Corps of the U.S. Navy. The organizational structure of the Armed Forces Radiobiology Research Institute is that of a Directorate, consisting of a Director and two deputy directors representing the three branches of the Armed Services.

The Naval Hospital, Naval Medical School, and Naval Dental School are housed principally in the central group of buildings. New construction to replace World War II temporary ward buildings began in August 1960, and was completed in the summer of 1963.

Separated from the above enumerated buildings are the Naval Medical Research Institute; the U.S. Naval School of Hospital Administration; the U.S. Navy Toxicology Unit; and the Armed Forces Radiobiology Research Institute; utility buildings; officers' and nurses' quarters; enlisted quarters; and the recreation building.

ROLE OF PRESIDENT ROOSEVELT IN ORIGIN OF NNMC

Excerpts from "The Military Surgeon," 107(4): October 1950, The Navy Builds a Medical Center, by Rear Admiral Lucius W. Johnson, MC USN, Retired.

"We will build it here."

President Franklin D. Roosevelt leaned over the side of the automobile as he spoke, and struck the ground with his cane. It was the afternoon of July 5, 1938, and the car stood in the cabbage patch of a rundown farm near Bethesda, Maryland. From this slight elevation could be seen the green fields sloping down toward the Rockville Pike, 300 feet away. A half-mile stretch of the road could be seen, and beyond it lay

the carefully landscaped grounds of the Public Health Service, also a neighboring estate.

"By this gesture and this decision on the site for the Naval Medical Center, a long period of anxious uncertainty was ended. The President was reported to have said the next morning, "Perhaps we were too precipitate about that site. Maybe it's too far out in the country."

"Another feature was the spring and spring house located in a gully between the main building and the road. The bubbling pool and the tiny stream reminded the President of the Pool of Bethesda, in Jerusalem (John V, 2). Bethesda means "House of Mercy."

"In December 1937 he had drawn for Surgeon General Rossiter an elevation and ground plan of the building he visualized for the Medical Center, and this became our guide." (NOTE: Facsimiles of these plans will be published in a subsequent News Letter.)

History Taking in Genito-Urinary Disorders

B. G. Clarke, MD*, Associate Professor of Urology, Tufts University School of Medicine and J. Hartwell Harrison, MD**, Clinical Professor of Genito-Urinary Surgery, Harvard Medical School. Reprinted by permission of the authors from "Diseases of the Urinary and Genital Organs" (A Review and Bibliography)—pps 2-8, Boston, Mass., 1960.***

In all fields of medicine the history is a most important key to accurate diagnosis of disease processes. It serves to guide not only the initial investigations but treatment as well. After careful evaluation of symptoms and physical findings, diagnosis can be established with exceptional accuracy in genito-urinary diseases by the combined use of the laboratory, radiographic aids and cystoscopic investigation. Urology offers to the student methods and facilities that enable the actual measurement of changes brought about by disease to be contrasted with the normal.

PAIN

Pain arising from the kidneys and ureters usually is located in the flank, lower anterior abdomen, or groin. Similar pain can be caused by disease of the gall-bladder, bowel, pancreas, appendix, ovaries or tubes. Stimuli from the middle ureter may cause radiation of pain to the testis and from the intramural ureter to the glans penis. Pain from the testis or epididymis may not only be local in site, but radiate to the groin or abdomen. Pain from bladder, prostate or urethra has variable sites of reference, which may be elicited by careful questioning.

The patient must be persuaded to describe not only the location of pain, but the circumstances of its onset, its duration, whether or not it is persistent or intermittent, whether it radiates or migrates, and whether or not the patient has discovered that it may be pre-

cipitated or relieved by changes in posture or by some other factor. Within the genito-urinary organs pain can be caused by obstruction, by inflammation, by ischemia, or by tumor of a particular structure.

FEVER

Fever, characteristically, is a sign of spreading infection in kidneys, prostate, or gonads. It may also result from primary or metastatic tumor, especially of the kidney, or from ischemic necrosis of any of the urogenital organs.

MASSES

In the genito-urinary system a mass may represent a neoplasm, a cyst, a herniation, an inflammation or abscess, an ectopic organ, a tumor metastasis, or an aneurysm. When interviewing a patient about a mass it is important to learn its location and duration, whether or not it changes or has changed in size, and, if so, under what circumstances, and whether or not it is painful.

ABNORMAL MICTURITION

In the adult, the normal urinary bladder has a capacity of 300 to 500 cc. It empties completely during voluntary voiding which may be initiated at will. The normal individual voids three or four times during the

Fever and Anemia in Renal Cancer. Clarke, B. G., and Goad, W. J., Jr.: New England J Med 254: 107-110, January 19, 1956

day and not at all during the night except after an excessive intake of fluids. He experiences a characteristic urge to void which can be suppressed, voluntarily, for a considerable length of time. Deviation from this pattern betokens disorder. Careful questioning about micturitional abnormality reveals much about the character and anatomic location of the cause.

Thoughtful interpretation of symptoms of abnormal micturition yields much information about its cause. Frequent, urgent, painful micturition is due usually to inflammation of the bladder and, in the male patient, of the prostate gland. Tenesmus or spasm at the conclusion of voiding is due to disease of the vesical outlet and may be followed by a few drops of blood. Diminished force and caliber of the urinary stream indicate obstruction. It may be accompanied by hesitant initiation or intermittent cessation of flow as well as by dribbling at the end of voiding.

Hematuria appearing in the first part of the voided urine usually originates from the urethra or prostate. Blood homogeneously mingled in the urine usually comes from diseased kidneys, ureters or bladder. Frequent voiding may result from a small capacity of the bladder, from hyperactive voiding reflexes, from overirritability of the bladder resulting from inflammatory disease, or from repeated ineffective attempts to void when the bladder is overfilled as the result of obstruction or of paralysis due to spinal cord disease. Careful evaluation of these nuances of the history is, when combined with the physical examination, extremely useful to the examiner.

PHYSICAL EXAMINATION IN UROLOGIC DISORDERS

The physical examination of the patient with suspected disease of the urinary system has the same requirements as does correct physical examination generally. Good illumination is essential. The patient should be as comfortable and relaxed as possible. Efficient and systematic observation are essential. Haste defeats itself. Inspection and palpation, aided by percussion and auscultation are each important. In all situations, the examiner must have in mind a clear mental picture of the normal anatomic location, structure, and relations of the organ he is examining.

Examination of the abdomen, inguinal region, and scrotum should be made in the supine and standing positions. Examination of the kidneys and retroperitoneal areas is accomplished with the patient supine and thighs flexed, using bimanual palpation during inspiration and expiration.

In male patients the penis is inspected. With foreskin retracted the foreskin and glans are examined. The meatus is viewed for stricture or hypospadias. The urethra, from meatus to bulb, is palpated for tumor or chancre.

During the examination of the testis and epididymis, one hand steadies the contents of the hemiscrotum while the other hand palpates them. Each is palpated in turn, noting consistency, size, and position. The epididymis normally is located posterior to the testis. The vas deferens and vessels are identified by pulling the testis downward to stretch the cord structures slightly. Scrotal masses are transilluminated to distinguish fluid which transmits light readily in hydroceles and spermatoceles from solid tumors or inflammatory masses.

During palpation of inguinal and femoral regions one notes particularly the presence or absence of lymphadenopathy, the femoral arterial pulsations, fascial defects or protruding hernial sacs. The latter are best detected, in adults, while the patient stands. The external ring may be palpated accurately with the fingertips in the evaginated scrotum. In infants and children indirect inguinal hernia sacs may be sensed as thickenings of the spermatic cords as they course out of the inguinal canals over the pubic crest into the scrotum. Abdominal tumors in small children are transilluminated to distinguish fluid-filled hydronephroses from other tumors.

During the rectal examination one must inspect the perineum and anus under good light. Generous amounts of lubricant on the examining finger diminish discomfort and the patient is asked to strain down as in defecation to relax the anal sphincter as the finger is inserted. The tonicity of the anal sphincter and levators, presence or absence of lesions of the anal canal and intra-rectal or para-rectal pathology are all noted. The prostate is examined, by touch, for its size, which is about 3 cm across; its contour which is heart-shaped; its consistency which is resilient, and whether or not the organ is tender, or soft, or contains lumps or masses. Normally the gland is slightly moveable up and down as it rests upon the urogenital membrane. Fixation of the gland is abnormal. In conjunction with the prostate the adjacent posterior bladder wall, seminal vesicles, and prostatic lymphatics paralleling the vesicles should be palpated. Normally they are soft and rather vague to the touch but when diseased are often readily discernible.

Prostatic fluid may be collected for microscopy, culture or cytologic study by examining the gland while the patient is standing and bent forward or in the knee-chest position. The gland is stroked firmly with the fingertip on alternating sides, from above and laterally downward and medially. If fluid does not flow from the urethra it may be collected by gentle pressure on the bulbous urethra or milked from the urethra by the patient.

Physical Examination of the Surgical Patient. Dunphy, J. E.; and Botsford, T. W.: 2nd ed. Phila., W. B. Saunders, 1958
Demonstrations of Physical Signs in Clinical Surgery. Bailey; Hamilton: 9th Ed. Balt. Williams & Wilkins Co. 1944

EXAMINATION OF THE URINE

In no patient should routine urinalysis be omitted. The container must be clean. Laboratory examination must be performed, if accurate results are desired, within an hour or two after voiding before bacteria begin to proliferate and before formed elements disintegrate. The most dependable results are obtained when the responsible examiner does the analysis himself at once.

If possible, one should take the opportunity to watch the patient, whether young or old, while he voids. Abnormal straining will become apparent as will slow micturition, hesitancy, intermittency, dribbling, dysuria, or loss of control.

If disease of the urethra, prostate or bladder is suspected in a male, he may be asked to void in two glasses after the examiner has inspected the urethral meatus for pus or blood. Pus or shreds of exudate or blood appearing only in the first glass suggest disease in the urethra whereas similar elements in the second or both glasses suggest a lesion higher in the urinary system.

If urinary infection is likely much may be learned about its character in a short time by examining a drop of centrifuged urinary sediment stained by Gram's method.

Cultures are a more sensitive and accurate method for ascertaining the presence or absence of infection. When technical facilities are available bacterial counts should always be performed. Bacterial counts over 100,000 per ml almost always signify infection. Fewer than 1,000 suggest contamination or result from inconsequential urethral flora. Counts in intermediate ranges must be evaluated in conjunction with other criteria

and if at variance with them the cultures should be repeated. The results of quantitative cultures are generally dependable in male or female patients if the genitalia have been cleansed, if the "mid-stream" urine has been aseptically collected, and particularly if morning specimen is collected. *Sterile urine remains sterile in the body overnight whereas bacteria, if they are present, will proliferate in the bladder while the patient sleeps and appear in greater numbers in the morning urine.*

Cytological (Papanicolaou) examinations of urinary sediment for evidence of malignancy have not been dependable for renal or prostatic cancer, but are very helpful for diagnosing primary or recurrent carcinoma of the bladder.

Study of Five Hundred Patients with Asymptomatic Hematuria. Greene, L. F.; O'Shaughnessy, E. J.; and Hendricks, E. D.: JAMA 161: 610-613, June 16, 1956

Essential Renal Hematuria. MacMahon, H. E.; and Latorrace, R.: J Urol 71: 667-676, June 1954

Cytology of the Prostate Gland in Diagnosis of Cancer. Clarke, B. G.; and Bamford, S. B.: JAMA 172: 1750-1753, April 16, 1960

The Reliability of the Papanicolaou Technique When Cancer Cells are Found in the Urine. Roland, S. I.; and Marshall, V. F.: Surg, Gyn & Obstet 104: 41-44, January 1957

* Doctor Clarke's current address is 1224 Jefferson Bldg., Peoria, Illinois 61602. He holds the rank of Commander in the Medical Corps of the Ready Reserve, and is engaged in the private practice of Urology. He served as a medical officer on active duty with the Navy during World War II and the Korean Conflict. We are indebted to both authors for this opportunity to republish their material.

** Doctor Harrison holds the rank of Lt. Col. MC AUS, Retired.

*** Doctors Clarke and Harrison had a thousand copies of this publication made and distributed to students and house officers at Harvard and Tufts. The supply is now exhausted. Through special permission of the authors, it is planned to republish in future issues of the Medical News Letter, selected papers from this excellent 137-page document.

—Editor

PREVENTION OF MENTAL ILLNESS

A seminar on public health practice and the prevention of mental illness was held in London from 6 to 17 July 1964 by the WHO Regional Office for Europe, in co-operation with the Government of the United Kingdom. It discussed the role of the public health and mental health services in the prevention of mental disorders, with special emphasis on services administered and operated by public health personnel, including maternal and child health centres, school and university health services, and services for the elderly. The theory and practice of general preventive measures, including the health education of the public with regard to mental health and the preventive role of the visiting nurse, were also reviewed.

The participants in the seminar included public health administrators, general practitioners, paediatricians, public health nurses, and mental health staff.

TEACHING OF PREVENTIVE MEDICINE IN EUROPE

Progress in the teaching of the preventive aspects of medicine in European medical schools over the past 10-15 years was discussed at a Symposium held from 22 to 30 July 1964 in Nancy, France, by the WHO Regional Office for Europe. The aims and scope of such teaching were reviewed, together with ways and means of improving it.

Specific topics included: the teaching of preventive medicine in connection with the preclinical and clinical sciences, pathology, microbiology, and psychology; the place of statistics and epidemiology in such teaching; and the role of special chairs of preventive and social medicine.

The Symposium was attended by some 30 participants from countries in the European Region, and by representatives of several international organizations.

The Problem of Psychosomatic Diagnosis

CAPT Charles S. Mullin MC USN*. From the Proceedings of the Monthly Staff Conferences of the U.S. Naval Hospital, NNMC, Bethesda, Md. 20014

This discussion shall be confined to the type of psycho-physiological disturbance of somatic function which has not yet led to observation of tissue change as, for example, in a neurodermatitis or a gastric ulcer and, hence, may represent a diagnostic problem: the psychogenic headache and backache, dyspepsia, diarrhea, or what not.

It is indeed a tragedy to mistake the symptoms of gastric carcinoma for neurotic dyspepsia, but neither is it of benefit to subject a nostalgic recruit to a laparotomy when his abdominal pain and vomiting are more expressive of a yearning for home and loved ones than indicative of some intra-abdominal disorder; or to subject the unhappy housewife to a graded series of pelvic interventions when her longstanding and medically frustrating symptoms are more reflective of domestic infelicity than of primary GYN disease.

Nonetheless, it is my thesis that considerably more time, energy, and anxiety are expended than is necessary, by the average medical officer in a search for primary organic factors to explain the somatic symptoms arising from an emotional disturbance, to arrive safely and soundly at the correct diagnosis. The approach to diagnosis often seems to be too much of a negative process, i.e., if all possible tests and examinations are negative, then the condition must be psychogenic.

It is recommended that more consideration be given to the positive approach to the diagnosis of the psychosomatic condition and following are some suggestions as to how this may be effected.

Perhaps one of the most common reasons for delayed diagnosis is that the possibility of emotional determination is simply not seriously entertained. When the physician considers that the symptoms at hand may be of an emotional origin it is of value to elicit evidence of basic pathological anxiety and/or depression. The average patient complaining of psychogenic headache, backache, indigestion, frequency, lower bowel disturbance, fatigue, or what not, will show evidence of basic anxiety or depression even though he neither admits "nervousness" or depression or recognizes that he is in fact anxious or depressed.

Naturally, signs of undue tension should be looked for (due consideration being given, of course, to the possibility that some degree of autonomic reaction may be the result of the examination itself or other extraneous influences). The tense, nervous manner, the rapid beating of the carotid pulse, palings and flushings, dilated pupils, tremor of the hands or voice, hyperhidrosis, cold moist hands, various aberrations of

breathing, may serve as examples; sighing, rapid, shallow, or irregular respirations, and aerophagy are of course useful findings in this connection. A "pounding" quality of the heart beat on auscultation without a necessary increase in rate may be of significance. One of the more useful indications is palmar sweating. Cold sweating palms, especially in the absence of much sweating elsewhere, is a fairly certain indication of anxiety; the symptom is also found in patients who do not choose to acknowledge "nervousness" because of their reluctance to have symptoms degraded as mental in origin or in patients who do not feel any anxiety. Sweating of this kind is of particular diagnostic value if the patient realizes that the condition has been present since the beginning of the preoccupying complaints.

In addition to these objective physiological evidences of anxiety, it is important to inquire about the presence of certain subjective manifestations, one or more of which are invariably present in psychosomatic disorders in addition to the presenting complaints. These might include undue consciousness of heart action, ready breathlessness, increased frequency of micturition, pressure head sensations, postural dizziness, impaired concentration, "shakiness" on effort, restless sleep, impaired appetite, morning nausea, or gastric distress. Any of these symptoms might be a reflection of organic disease, but in psychosomatic diagnosis if none of these corollary manifestations are present, in addition to the main complaint, some doubt justifiably might be entertained in the assumption of psychogenesis. The symptoms are especially valuable if they have been noticed only since the patient's presenting symptoms have troubled him. The point is that such symptoms if elicited are often not given due consideration.

A careful consideration of the special features of the presenting symptomatology itself is helpful in arriving at the correct diagnosis. For purpose of illustration this discussion will include symptoms referable to the gastrointestinal tract, the cardio-respiratory system, and the neuromuscular system.

Gastrointestinal. Complaints referable to the upper GI tract, especially the stomach, are quite common. There are some "typical" features of the symptomatic picture of the psychologically determined non-ulcerative gastric disorder, and this will be described. (It is recognized, of course, that certain organic diseases can give rise to the picture resembling many of the features of the symptomatic pattern to be described. Therefore, too heavy reliance should not be placed on this one feature of the entire picture and any patient over 35 who complains of chronic dyspeptic symptoms should have a thorough radiological survey. However, taken in con-

* Doctor Mullin is Chief of Neuropsychiatry Service of the USNH, NNMC, Bethesda, Md.

junction with other elements of the total picture, a consideration of the descriptive aspects of the presenting complaint is of value.) The pain is diffuse and vaguely described. It comes on within an hour after meals. Food aggravates rather than alleviates this pain and the effect of alkalies is quite variable. There are inconsistencies in the type of food indicated as especially irritant. Usually "heavy" fried or greasy foods are avoided. Often, preconceived notions (or a conditioning process) are determinant in the patient who can digest milk but is unable to take eggs; apples but not oranges; bacon but not fried ham; broccoli but not spinach. (A case from the Medical Department that came to my attention recently becomes dyspeptic only when he ingests citrus fruits or bananas.) A fair to good appetite prior to sitting down to a meal, followed by loss of appetite or even revulsion at the sight of food or after a few mouthfuls is characteristic. "Food seems to stick on the way down," "lays heavily on the stomach," or "it does not seem to digest properly." Quivery, tremulous and "nervous" feelings in the stomach are often described. Recognition of the relationship between emotional tension and aggravation of symptoms is frequently present. Morning nausea is very common. Vomiting is also common, usually within an hour of taking food, and often relieves the distress immediately.

Aerophagy. A word might be said at this point about the affects of aerophagy. As you remember, little Abner often gulps nervously when he is in a tight situation. The nervous and compulsive swallower accumulates large amounts of air in his bowels which may have the effect of pushing up against the diaphragm and disturbing the anatomic physiological relationships within the thorax. The situation may be quite misleading and give rise to symptoms suggestive of peptic ulcer, gallstones, and heart disease, including angina pectoris.

Cardio-respiratory. These complaints include chest pains, palpitations, and breathlessness, alone or on combination. The pain is usually apical in location. However, there is occasional substernal localization but I have never heard the pain described as crushing or pain referred to the basal region of the cardiac silhouette where I felt this condition was psychogenic. The shortness of breath from some sensation of oppression through the chest, the feeling of inability to get a "satisfying" breath is often associated with frequent and sighing respirations as the patient tries to get more air and rid himself of the anxious feeling in his chest. The shortness of breath is present on slight exertion and sometimes, if the symptom is scrutinized closely, it is ascertained as the breathlessness begins almost immediately with the commencement of the exertional effort and indeed seems almost anticipatory. I once observed a group of soldiers in a British Hospital during World War II, all of whom were suffering from so-called effort syndrome, who experienced much less discomfort from their symptoms of breathlessness, palpitations, and

fatigue when they were required to walk up a certain small hill backwards than they experienced when they had to climb the same hill while facing it! The anxiety they experienced was also less.

Neuromuscular. Aches and pains in various parts of the body, especially in the back and extremities are frequent complaints. Here the pain typically travels from one part of the body to another. Muscles are involved more than joints. In the extremity that is currently the most troublesome, tremors and increased sweating are observed. Examination of the part often seems to cause a definite increase in the anxiety independent of pain. Feelings of stiffness, swelling, and tightness of the involved part in the absence of any objective signs are common. Then there is the familiar psychogenic backache. When back pain is complained of the patient will usually agree that there is also marked weakness of the lower back. Hyperesthesia of the skin on the lower back is frequently present. Often a mere light stroking of the skin causes the patient to flinch or to complain that the sensation is unpleasant. Radiation of pain down the back of the legs is rare. Radiation of low back pain upward is, I believe, rare in organic infections but not uncommon in psychogenic backaches. Further I have never heard a patient describe a sharp increase in pain on coughing or sneezing who did not in all likelihood suffer from an organic lesion, whatever the psychogenic elaboration. (I would suggest that the typical psychogenic backache represents the combined influences of sustained muscular contraction, poor posture induced by the impaired morale of the neurotic patient or, above all, the factor of attentional elaboration.)

In endeavoring to make a psychosomatic diagnosis, attention should certainly be directed to the patient's personality. Is the patient's personality the type or quality that might be related to a susceptibility to neurotic symptoms? This "predisposition" may be discerned in the sphere of behavior or symptomatology. Tactful inquiry can be made into the patient's familial, social, occupational and marital adjustment and, if the occasion is propitious, the sexual adjustment of neurotic patients or the majority of patients with psychosomatic symptoms will show evidence of some failure of adjustment in one or more of these areas. Inquiry might also be made into the existence of so-called "neurotic" traits in the past, for example, frequent nightmares, sleepwalking, prolonged thumb sucking, enuresis, etc. However, these are not nearly so significant in the past history as the existence of suggestive "psychosomatic" symptoms. It is well to look for past history of frequent headaches (often of the "sick" variety) capricious appetite, frequent gastric distress, frequent dizzy spells and fainting attacks, undue consciousness of heart action, tendency to breathlessness, lack of physical stamina out of proportion to physical build, ready fatigability, susceptibility to frequent colds, tendency to backaches and vague rheumatic pain, and certainly

menstrual difficulties in women. Whenever possible, it is useful to evaluate these manifestations in the light of the patient's life situation at the time of their occurrence.

Finally, in endeavoring to establish a psychosomatic diagnosis it is helpful to search for causative factors. I seldom have complete confidence in my diagnosis unless I am able to discern some evidence of plausible psychodynamics. (There is one exception to which I will allude later.) Most psychogenic conditions are the result of a variety of subtly interacting factors. But in most instances the principal precipitating factors and dynamic themes can be discovered if one knows what to look for. In very general terms it may be said that any persisting threat to security or self-esteem or chronic lack of emotional satisfaction crucial to the person may give rise to anxiety and depression and their diverse symptomatic and attitudinized elaborations. Such threats or lack of emotional satisfaction may be inherent in a number of situational patterns. Following are some of the more frequent.

The usual, and quite obvious, domestic, financial, marital, sexual and disciplinary troubles. Oddly enough, the patient frequently fails to mention these important and obvious worries because he does not think they are relevant. Hence the possibility of immediate conscious problem must always be considered.

Separation from a milieu of home, family and civilian life in which the patient felt secure (including the familiar nostalgia of an immature recruit).

General thwarting of emotional satisfaction, inherent in the military setup, in a person of strong dependency needs. This type of conflict may be an important part of the emotional stress of the factors mentioned above but very often exists independently of the mere fact of separation from civilian security and support. This is a very common type of conflict and it is often more or less subtly disguised—perhaps as an overcompensatory aggressiveness or air of independence.

Anxiety related to the arousal of hitherto dormant, but potentially powerful, hostile impulses as the result of "temperamental" clash with certain aspects of a military organization; perhaps the restriction and regimentation of the life and the presumed arbitrary discipline, or interpersonal difficulties with specific authoritarian figures.

In the case of female dependents, there is a familiar problem of rebellion against the burdens of her triple role of mother, wife, and housewife.

Homosexual conflicts, conscious or otherwise, brought about by a life of close communal association with other men as well as anxiety related to other sexual problems.

Increase pressure of work and responsibility (often following promotion) in a basically insecure person.

As an illustration as to how this approach can rule out the psychosomatic condition as well as rule it in, I should like to cite a case of mine that gave me a

certain unseemly satisfaction. This was the case of a plebe midshipman and trackman I saw some time ago. For two weeks he had been coming down faithfully to sick call with complaints of pain in both lower legs. He was told he had "shin splints." He had been placed on the excused squad, was temporarily taken off the cross-country squad and extensively treated with all the facilities available to the medical department accustomed to treating injured athletes. He had had all kinds of physiotherapy including ultrasonic treatment. But still he came back day after day complaining of no improvement. Finally after hobbling down to one particularly crowded sick call his familiar and frustrating presence aroused such negative feelings that he was told "look plebe, this is either all in your head or you're a gold bricker and I'm going to send you to the psychiatrist." He shuffled painfully into my office. He seemed aggrieved and was obviously having difficulty controlling his irritation. However, the more I talked with him the less convinced I was that he had a psychosomatic or hysterical condition. First there was no particular evidence of pathological or inappropriate anxiety or depression. Second, the description of the symptoms themselves did not appear particularly suggestive—just pain in the lower shins—no symptoms referable to any other systems. Third, the previous personality and previous life adjustment seemed perfectly satisfactory. Fourth, and finally, there seemed to be no particular reason why he should have this particular complaint. It would be more to his advantage not to have it, as he was a good athlete and could get on a training table and thus escape much of the stress of the plebe "indoctrination" program. I had recently come across an article about traumatic periostitis and was all primed. I took him by hand down to the x-ray department, had some plates taken and to my amateur view there appeared to be some pathology in his lower tibias. This was confirmed by the radiologist who made a diagnosis of traumatic periostitis. This sort of triumph does not occur very often; I cite the case not to crow, but to illustrate my points.

I mentioned above that I am never completely satisfied about my diagnosis of a psychosomatic condition if I am unable to discern plausible reasons why the man should have the symptoms. There is one exception. A severe depression can be concealed by a preoccupying complaint of pain in some part of the body. This depression may have no known psychological origin and must be considered "endogenous." Both patient and physician become absorbed in endeavoring to track down the cause of the pain and miss entirely the existence of depression or consider that it is secondary. I had an officer patient at this hospital some years ago who had been admitted twice to the Medical Service for investigation of multiple somatic complaints including divers pains and aches. He had accumulated a most impressive and weighty chart. Finally, he was sent to the psychiatric department and it appeared to me that

his basic trouble was a severe depression, although there seemed to be no obvious psychological reason why he should have this condition. He submitted to five electro-convulsive therapies. After the second treatment he was completely free of all symptoms that had troubled him for months in the past and asked to be permitted to go out and play golf. He was eventually returned to duty.

A final word of caution: While direct and even "leading" questions may be necessary to save time, one should endeavor to minimize the possibility of "suggesting" symptoms to the patient, and, of course, one should be sympathetic and respectful of the patient

as a person and avoid any "third degree" approach which could inhibit frank and objective responses.

To summarize: The identification of a so-called "psychosomatic" condition can be greatly expedited, with benefit to patient and physician, by placing emphasis more on the positive systematic approach to the diagnosis rather than on the customary negative "ruling out" process. This is accomplished by being alert to the possibility of psychogenicity, by looking for evidence of anxiety, or depression by considering the quality of the previous personality, by studying the specific features of presenting symptomatology and finally by seeking diligently (but not overstrainingly) for plausible psychodynamics.



MEETING OF THE MILITARY GOVERNMENT-CIVIL AFFAIRS PUBLIC HEALTH SOCIETY

The Military Government-Civil Affairs Public Health Society will hold its annual meeting in New York City, on Wednesday, 7 October 1964, in conjunction with the Annual Convention of the American Public Health Association.

The dinner meeting will be at 5:30 p.m. in the Warwick Room of the Warwick Hotel, featuring LCOL Heyward G. Brown VC USA as the principal speaker, who will talk on, "U.S. Army Civic Action in Eritrea, 1960-1963." The professional program is between 7:30-9:30 p.m.

The Society is an organization of professional personnel, most of whom have active or reserve military status and have served or are currently assigned to a military organization in a position involving public health responsibilities in relation to civil affairs. This is the only association which actively maintains and develops a group of professional personnel experienced in the public health and medical care functions of civil affairs and military government.

Medical personnel, on active and inactive duty, planning to attend the Annual Convention of the APHA may be interested in attending the meeting of the Society. BuMed funds cannot be provided for this purpose.—Submitted by Preventive Medicine Div., BuMed.

Miscellany

ACTIVE DUTY MEDICAL OFFICERS IN PRIVATE PRACTICE

A recent instance has come to the attention of the Judge Advocate General of the Navy, wherein an active duty medical officer has placed himself in a position of jeopardy through the administration of his private civilian practice. The policy of the Navy in regard to officers in private practice is clearly stated in Article 3-26A, Manual of the Medical Department, U.S. Navy.

All active duty medical officers are urged to familiarize themselves with the contents of the above noted article. Those active duty officers who are engaged in civilian practice or any type of civilian professional affiliation are urged to pay particular attention to paragraphs (5) and (7), of that article, which read as follows:

"5. BUMED considers that the authority is in the commanding officer of the Medical Corps officer concerned to determine either that private practice interferes or does not interfere with the officer's performance of duty in the command. Professional liaison with local and national medical associations having to do with relationship between physicians who have status as officers of the Medical Department of the Navy and private practitioners is a matter of technical control by BUMED.

"7. A physician in any private medical activity or practice who also is an officer of the Medical Corps on extended active duty shall not accept a fee, directly or

indirectly, for care of a member, or dependent of a member, of the uniformed services entitled to medical care by the uniformed services."—Medical Corps Branch, Professional Div., BuMed.

COMMENDATION FOR ACHIEVEMENT

LCDR Owedia Marie Searcy NC USN, received the Navy Commendation for Achievement on 21 July 1964 for outstanding achievement in the superior performance of her duties as set forth in the following CITATION:

"During the period 14 September 1963 through 1 June 1964, while serving as the Anesthetist and Operating Room Nurse of the Headquarters Support Activity, Station Hospital, Saigon, Republic of Vietnam, LCDR Searcy consistently carried out her duties with outstanding skill and resourcefulness, contributing directly to a progressive increase in this facility's capabilities and responsiveness in the treatment of combat casualties and various other emergency and routine treatment. Specifically, she was charged with the responsibility for insuring the functional capability of an emergency room and operating room in a newly remodeled hospital. Through her tenacity, untiring efforts and professional ability, these facilities were operational in optimum time. LCDR Searcy's leadership, personal integrity and devotion to duty were in keeping with the highest traditions of the naval service."

S/ Paul H. Nitze
Secretary of the Navy

MERITORIOUS MAST AWARDED HM 1 ROY L. STRACK USN

On 17 August 1964 HM 1 Strack appeared before A. R. Rieder USMC, Commanding Officer, Marine Air Base Squadron 11, Marine Aircraft Group II, 1st Marine Aircraft Wing, Aircraft FMF, Pacific, who made the following remarks regarding Strack's accomplishments:

"You are hereby commended for your performance of additional duty as the medical instructor in a Special NCO course held at Marine Air Base Squadron 11 during the period 3-6 August 1964.

"The manner in which you presented your instructions and the professional attitude which you have shown are evidence of a high degree of competence and devotion to duty. The Marine Corps is especially pleased to recognize outstanding performance of duty by members of the U.S. Navy serving with us.

"In accordance with (the provisions of) the Marine Corps Personnel Manual, a copy of this letter will be forwarded to your Officer-in-Charge for inclusion with your next fitness report."

ADMIRAL KREUZ TO HOST NAVY PARTY DURING ACS MEETING

During the American College of Surgeons meeting in Chicago, an "All Navy" social party, with refreshments, will be sponsored by RADM Frank P. Kreuz MC USN, on Wednesday, 7 October 1964, from 6:00-8:00 p.m. at the University Club, 76 Monroe Street, Chicago. Admiral Kreuz is Commanding Officer of the U.S. Naval Hospital, Great Lakes, Illinois, and DMO, NINTH Naval District.

Naval Officers past and present, and their ladies are cordially invited to attend. Subscription is \$5.00 per person. Forward checks and reservations to CAPT Philip O. Geib MC USN, Chief of Surgery at the Naval Hospital, Great Lakes, Illinois.

Urgent Training Notice

APPLICATIONS FOR INSERVICE RESIDENCY TRAINING 1965-1966

Interested applicants for inservice residency training, should carefully review BUMEDINST. 1520. 10B for information concerning programs offered and procedure for submitting applications.

Deadline for submission for inservice training programs to begin in the summer of 1965 is 15 November 1964. Candidates will be notified of selection or non-selection by 15 December 1964. Applications, submitted via chain of command, should be for the full training program as outlined in BUMEDINST. 1520. 10B.

Combined programs, such as in Neurosurgery, should be requested for the inservice portion first to begin in the summer of 1965, with the civilian portion to follow in a civilian institution to be determined.

Applicants are encouraged to list at least three choices of naval hospitals for location of training if such choices exist in the chosen specialty, and may feel free to write the chiefs of services for details for the training offered, if desired.

Early submission of applications is recommended to assure processing through chain of command and receipt in BuMed prior to the 15 November 1964 deadline.—Training Branch, Professional Div., BuMed.

OAK KNOLL PROVIDES PEDIATRIC TRAINING PROGRAM FOR CIVILIAN NURSING STUDENTS

CDR Delmer J. Pascoe, Chief of Pediatrics at U.S. Naval Hospital, Oakland, addressed Oakland City College nursing students at their recent graduation. "The Challenge of Nursing Today" was his subject.

Under Doctor Pascoe's leadership and that of former Oak Knoll Chief Nurse, CDR Ruth M. Cohen, Oak

Knoll provided practical experience in pediatric nursing for the Oakland City College nursing students during the past year. The young ladies, coming in small groups, worked on the ward and in the Pediatric Clinic, where they gained knowledge of procedures required for office nursing.

The affiliation will continue during the coming year under the guidance of CDR Veronica Bulshefski, Chief Nurse; Mrs. Margaret Gingrich, Chairman of the Department of Professional Nursing at the college; and Doctor Pascoe.—Submitted by RADM Cecil L. Andrews MC USN, Commanding Officer, USNH, Oakland, California.

NEW CERTIFICATION PROGRAM FOR BIOLOGICAL PHOTOGRAPHERS

A certification program for biological photographers—under development for 15 years—was launched on 24 August 1964, by the Biological Photographic Association. The Association is beginning its 34th annual meeting at the Roosevelt Hotel in New York.

Approximately 900 intensive users of photography as a scientific tool in biology, medicine and agriculture are members of the Biological Photographic Association. The certification program announced today is designed to set meaningful criteria for judging professional competence and for planning educational and scientific institutions seeking capable specialists and to photographers and scientists seeking to advance their competence.

A series of practical, written and oral examinations will be conducted for applicants meeting educational and experience qualifications. Examinations will cover photographic technology and subject matter in the sciences selected for specialization.

Consultants to the BPA Education and Certification

Committee include representatives of American Association of Dental Schools, American Dental Association, American College of Hospital Administrators, American College of Surgeons, American Hospital Association, American Institute of Biological Science, American Medical Association, American Veterinary Medical Association.

Detailed information on the certification program of the Biological Photographic Association can be obtained from certification committee chairman Howard Tribe, Chief of the Medical Illustration Service, University of Utah College of Medicine, Salt Lake City.

SAFETY MESSAGE

By Courtesy of the State Police and the Department of Health and Welfare, Bureau of Health, State of Maine.

Many and sharp the numerous ills inwoven with our frame:

More pointed still, we make ourselves Regret, Remorse, and Shame,

And man, whose heaven-erected face, the smiles of love adorn—

Man's inhumanity to man makes countless thousands mourn.

"These classic lines were written by the immortal Scottish poet, Robert Burns, before the days of automobiles, but they are timeless. On foot, in a horse-drawn vehicle, or on a superhighway, the principle is the same. Without consideration for the other fellow as another human being, tragedy and heartbreak follow." (Quoted from Dr. Will B. Campbell, Former President, Kentucky Wesleyan College.)

NOTE: The State Police of Maine implore people to read this article and to drive by "The Golden Rule."

—Editor

HEAT ILLNESS

In 1962 WHO convened a Conference on Medicine and Public Health in the Arctic and Antarctic, at which the problems of cold were discussed at length. Although problems of heat are incomparably more important, since an immeasurably greater number of people live in hot countries and most of WHO's work is concerned with them, no conference dealing specifically with these problems has yet been convened, no doubt because so many of them are subsumed under WHO's multifarious activities in tropical countries. In 1960, however, on the proposal of the representative of Saudi Arabia at the tenth session of the WHO Regional Committee for the Eastern Mediterranean, the subject "Solar radiation and its related heat effect on the human organism" was chosen for the technical discussions to be held at the twelfth session in 1962. In preparation for the discussions, a WHO advisory mission attended the 1961 Mecca Pilgrimage at the invitation of the Saudi Arabian Government.

The first of these two articles on heat illness was prepared by Dr. A. W. El Halawani, WHO Deputy Regional Director for the Eastern Mediterranean, who was a member of the mission. The second, by Dr. C. S. Leithead, Lecturer in Tropical Medicine, Liverpool School of Tropical Medicine, who contributed a paper to the technical discussions and who is co-author of a recent book on the subject, places heat illnesses in their background and shows how much remains to be learned about them. The WHO Regional Committee for the Eastern Mediterranean, after a debate on the report of the technical discussions, recommended that heat illness should be regarded as an important public health problem and included in WHO's research programme.

From the Note Book

Program of "Third Annual Federal Services Pharmaceutical Seminar, 23 October 1964—Officers Club, Bolling AFB, Washington, D. C.

8:30 a.m. Registration	Officers Club
9:00 a.m. Morning Session	Officers Club
Presiding: John M. Gooch, Chairman, Military Pharmacy Section	
1. Opening Remarks and Introduction of Visiting Dignitaries—John M. Gooch	
2. Bio-degradable Detergents—Leon W. Weinberger, Sc.D., Chief, Basic and Applied Sciences Branch, Division of Water Supply and Pollution Control, U.S. Public Health Service, Department of Health, Education, and Welfare, Washington, D. C.	
3. Botulism, Current Status and Need for the Toxoid—Paul J. Kadull MD, Chief, Medical Investigation Division, U.S. Army Biological Laboratories, Ft. Detrick, Md.	
12:15 p.m. Luncheon	Officers Club
Presiding: CAPT Leroy Werley, Jr., Consultant in Pharmacy, USAF, MC, Office of the Surgeon General, Department of the Air Force, Washington, D. C.	
Luncheon Speaker—Major General R. L. Bohannon, USAF, MC, Surgeon General, USAF, Washington, D. C.	
2:00 p.m. Afternoon Session	Officers Club
Presiding: Lt Col Melvin Crotty, U.S. Army, Vice Chairman, Military Pharmacy Section	
1. Adverse Drug Reacting Reporting System and Drug Recall Program from IPAD Point of View—Rear Admiral C. A. Blick USN, Executive Director, Procurement and Production, Headquarters Defense Supply Agency, Cameron Station, Alexandria, Virginia—Chairman; Inter-Governmental Procurement Advisory Council on Drugs.	
2. Medication Errors in the Pharmacy—Leo Godley, Chief Pharmacist, Harris Hospital, Ft. Worth, Texas	
3. Medical and Legal Responsibilities on Blood Banking Groups—Paul D. Canton MD, Bethesda, Md.	
4. Closing Remarks—Lt Col Melvin W. Crotty, U.S. Army	

NOTE: Those interested in attending should contact the Program Chairman, CAPT Claude V. Timberlake, Jr. MSC USN, Bureau of Medicine and Surgery (Code 43), Navy Department, Washington, D. C. 20390, Tel: OXFORD 62523. For this meeting, there are no fees or costs involved including the luncheon.

NEW RESIDENCY PROGRAM IN THORACIC SURGERY

The Bureau of Medicine and Surgery is pleased to announce the establishment of an approved two-year residency training program in Thoracic Surgery at the U.S. Naval Hospital, NNMC, Bethesda, Md. Initially it is anticipated that one first-year resident will enter the program.

The program will be in addition to the existing residencies in this specialty at San Diego and St. Albans.

Interested applicants should forward official requests to the Chief, Bureau of Medicine and Surgery, Department of the Navy, Washington, D. C. 20390, as outlined in BUMEDINST. 1520. 10B, prior to the 15 November 1964 deadline for receipt of applications. Application may be made only for the Bethesda program, or preferably should list the three hospitals in order of preference.—Training Branch, Professional Div., BuMed.

AMERICAN COLLEGE OF SURGEONS ANNUAL MEETING

This Annual Meeting will be held in Chicago, Illinois, on 5 through 9 October 1964. A special airlift, departing Andrews Air Force Base, Washington, D. C., is being tentatively scheduled to accommodate medical officers of the Armed Forces who desire to attend this meeting.

Interested medical officers should forward requests by message for reservations immediately to: Director, Professional Division, BuMed.

USNRDL SCIENTIST TO ATTEND BONE MARROW CONFERENCE AS GUEST OF FRENCH GOVERNMENT

Mr. Leonard J. Cole, Head of the Experimental Pathology Branch at the U.S. Naval Radiological Defense Laboratory in San Francisco, will participate as an invited speaker at the International Colloquium on Bone Marrow Transplantation in Paris, 7-9 September. His entire trip to Paris is being financed by the French National Center of Scientific Research.

Mr. Cole will report on "Conditioning of Bone Marrow Recipients by Means of Radiation Plus Chemotherapy." Human studies, particularly in connection with problems of treatment of leukemia by high doses of irradiation and bone marrow transplants, will be included in the 34 papers scheduled for the Colloquium.



Dental Section

DIFFERENTIATION OF SUBMAXILLARY LYMPHADENOPATHY AND SUB-MAXILLARY SALIVARY GLAND PATHOLOGY

*Louis Mandel, DDS and Harold Baumash, DDS,
School of Dental and Oral Surgery, Columbia Univ.
Oral Surg., Oral Med., and Oral Path. 15(1): 3-14,
January 1962.*

Due to the proximity of the submaxillary lymph nodes and the submaxillary salivary glands, confusion in differential diagnosis sometimes arises. The submaxillary nodes may become involved in such pathologic processes as dental infections, Vincent's and herpetic stomatitis, infectious mononucleosis, lymphomas, leukemias, and metastasizing neoplastic processes. Swelling of the submaxillary gland may be associated with sialolithiasis, acute and chronic sialadenitis, some viral diseases, Sjogren's syndrome, cystic and neoplastic conditions.

In establishing a diagnosis, history and physical examination are very important. Consider such information as the patient's general state of health, weight loss, blood picture, previous related swellings or inflammations, fluctuations in swelling size and their relation to eating, and associated mucous membranes or dental problems. Is there lymphadenopathy in other areas? Note tenderness, fluctuation, fixation and firmness of all positive lymph nodes.

The extraoral clinical examination should not be confined to the submaxillary area. The presence of positive nodes in the submental and cervical areas helps to differentiate lymphadenopathy from salivary gland disease. Observe the presence or absence of enlargement of other lymph nodes or of other salivary glands. Anatomically, submaxillary lymph node swelling is usually located more anteriorly in the submaxillary triangle. Palpation may reveal the nodes to be more superficial than the salivary gland.

Intraoral examination may determine presence or absence of dental infection and sequelae. Check the oral membranes and dental soft tissues for infection or irritating foci. Palpate the floor of the mouth to note tenderness, induration, ulceration and adherence to surrounding tissues. Observe the quantity and quality of saliva. Early drainage of pus through the ductal system resulting in a milky salivary flow would indicate acute infection of the salivary gland. With chronic sialadenitis the saliva would have a more flocculent or

turbid appearance. Quantitative decrease in saliva could indicate parenchymal destruction or obstructive interference.

The roentgenographic examination should include occlusal films as a survey for calcified material and provides a profile of the lingual and labial cortical bone. Intraoral periapical films will show presence or absence of dental diseases. Extraoral films may show calcified lymph nodes, sialoliths, or radiolucent areas.

Sialography shows the pattern of ductal arborization. It is altered in pathology of the salivary gland but is usually normal in ductal configuration with lymphadenopathy. The authors then give six case reports with the means used in establishing the differential diagnosis. (Submitted by CAPT Clyde R. Parks DC, USN, Naval Dental School, National Naval Medical Center, Bethesda, Maryland.)

A REVIEW OF THE PROBLEMS AND RESULTS OF STUDIES ON MANUAL AND POWER TOOTHBRUSHES

*Major M. Ash, Jr. DDS MS, University of Michigan
School of Dentistry, Jour Periodontics, 35(3): 202-213,
May-June 1964.*

Although power toothbrushes are not particularly recent in origin, advanced designs, intensive promotion, and widespread use of many types and manufacture have stimulated considerable interest and research into their safety and effectiveness. There are over seventy-five electric toothbrushes being marketed today; however, at the present time published reports of their safety and/or effectiveness have been limited (with few exceptions) to only two electric toothbrushes.

PROBLEMS OF EVALUATING TOOTHBRUSHES

There are no universally accepted criteria or methods for evaluating the effectiveness of a toothbrush. The absence of a common method is apparent in the approximately forty reports presented in the literature on the effectiveness of electric brushes. The reports not only show considerable variation in methods, but also in the criteria used for evaluating effectiveness. Some earlier as well as later studies are almost entirely subjective; some are case reports and preliminary reports; others are restricted studies that do not use, or at least report, standardized or statistically useable criteria; and still others include only a limited number of patients. In some studies the criteria for effective-

ness have been patients' statements that electric brushes were better than a regular brush, the teeth felt cleaner, or that electric brushes were easier to use than regular brushes. Other observations such as "less gingivitis," "less plaque," or "less bleeding," in five out of six patients using an electric brush can hardly be considered to be acceptable criteria of the effectiveness of a toothbrush. In some of the most recent studies better controls and criteria than previously used have been introduced.

Considering all the problems of equating types of bristles, methods of brushing, other variables, and the limited number of specific studies on the subject, the electric brush appears to be no more injurious to the soft tissues than a hand toothbrush.

SUMMARY

On the basis of the published reports reviewed and our own studies, it cannot be concluded that electric toothbrushes are any more effective than manual brushes for the average patient. It is recognized that one type of brush, electric or manual, may be more effective for one individual than another. Also one method of brushing may be more effective in one individual than another.

Because of conflicting reports and the limited number of studies on certain types of patients, there is no conclusive evidence to show that electric toothbrushes are more effective than manual brushes for a specific type of patient. It is possible that additional objective studies may specifically show that an electric brush may be used by a nurse or relative more effectively than a manual brush in the care of handicapped individuals.

Because of the absence of truly long term studies in which all factors responsible for periodontal disease are reasonably controlled or evaluated, it is impossible to evaluate the absolute effectiveness of any toothbrush. On the basis of our present state of knowledge, it is doubtful that any toothbrush now marketed should be considered as a therapeutic device. Most toothbrushes have some therapeutic effect if used correctly. To suggest that any toothbrush alone can treat or prevent disease effectively is not rational. However, it is rational to believe that a toothbrush, electric or manual, has a very important part in the maintenance of good oral hygiene when related to regular professional dental care and education of the patient in brushing are far more important than any specific toothbrush. (Submitted by CDR Perry C. Alexander, DC USN, U.S. Naval Dental Clinic, Long Beach, California.)

ADULTS MAY GAIN MORE FROM FLUORIDATION THAN CHILDREN

Dr. Frederick J. Stare MD, speaking at the 15th National Dental Health Conference sponsored by the American Dental Association, said: "Recent studies

have shown clearly that the administration of sodium fluoride in large amounts to adults, amounts varying from 20 to 150 mg. per day over periods of several months, is most effective in the treatment of osteoporosis and in some cases of Paget's Disease.

"There are indications that optimum ingestion of fluoride throughout life may be helpful in the prevention of osteoporosis, certainly a common disorder of our older citizens. Fewer fractures, and quicker and stronger healing when they do occur, would indeed be a boon to persons of advancing years. Optimal intake of the mineral nutrient fluoride throughout life may help to achieve this goal."

Dr. Stare linked the opposition to fluoridation to persons in the food faddist field and to quackery in general.

"There is more sense on nutrition than nonsense, though one might well wonder if this is so with all the nonsense one hears and reads these days about calories not counting, the therapeutic benefits of honey and vinegar, the 'poison' some 'misguided' individuals want to compel us to add to our water, the wonders of 'natural foods' and those fertilized organically, and of course, the nutritional nonsense over the radio and TV from people with no professional training in nutrition or any other area of health.

"Actually calories do count; honey and vinegar do not have any unusual therapeutic effects, nor for that matter does most of the other 'stuff' available in health food stores including 'natural foods' and organically fertilized foods; and fluoride is a mineral nutrient, not a poison."

Dr. Stare, who is chairman of the department of nutrition at Harvard School of Public Health, said there are strong psychological aspects to the public's susceptibility to quackery.

"Fear is a basic cause of vulnerability to quackery. Fear concerning illness, physical or mental incapacitation, weakness, and death returns us to the childish condition of wanting reassurance and strength from an uncritical adult who promises safety and well-being. Then is when the quack steps in and takes over.

"Much of modern dental and medical practice is unfortunately characterized by a brief, impersonal relationship between doctor and patient. We see much pain, disease, and suffering, all of it in detail and with unavoidable comparison to many similar cases. Hence, a patient's particular complaint is put in its proper perspective as to its severity and need of treatment. Perhaps too often, the proper prescription is something so unimpressive as a 'couple of aspirin.' But this is not enough to satisfy an individual who considers his complaints severe and deserving of sympathy and serious treatment. So he turns to the advertisement which seems to understand his pain, his need for a new and simple treatment. This is when the quack steps in to offer his sympathy, packaged as cleverly as the nostrum he sells.

"There are those who turn to quackery 'in extremis'; intelligent, well-educated people who have incurable disease who seize upon any promise of hope. And hope is what the quack offers in abundance. These victims are easily gulled by the quick, easy, and absolute relief the quack offers.

"Debunking of quackery's false and extravagant claims is a challenge to all in the health profession," Dr. Stare said.—Dental Division, BUMED

DETECTING CONTAMINATION IN DENTAL MERCURY*

Council on Dental Research. American Dental Association, 222 East Superior Street, Chicago 11, Ill. JADA 68: 287. February 1964. From Dental Abstracts 9(4): 230, April 1964.

The appearance of the surface of mercury indicates its freedom from many kinds of contaminants, and provides a useful, simple screening test of its suitability for clinical use.

Under certain conditions even mercury that complies with ADA Specification No. 6 for Dental Mercury may develop a scum. If scum is observed on the surface of mercury, the mercury should be filtered through a chamois skin or amalgam squeeze cloth. If after standing for 24 hours the filtered mercury does not have a mirrorlike surface the mercury should not be used for dental amalgam. Dentists suspicious of the purity of a dental mercury may forward an unopened bottle for examination to the ADA Research Division, National Bureau of Standards, Washington, D. C. 20234.

EFFECT OF PROPHYLAXIS AND DENTAL HEALTH EDUCATION ON PERIODONTAL STATUS*

Fay, Hsiao-dsung. Department of Dentistry, National Defense Medical Center, Taipei, Taiwan. Chinese M. J. 10: 243-247, September 1963. From Dental Abstracts 9(4): 248-249, April 1964.

Oral prophylaxis and dental health education together are effective in preventing or decreasing the prevalence of periodontal disease, but dental health education alone is not. This study involved Chinese soldiers, 20 to 45 years of age, from three companies selected at random from a Chinese infantry division. The men in Company A received both oral prophylaxis and dental health education in the form of lectures, demonstrations and discussion. The men in Company B received only two hours of dental health education, and those in Company C served as a control group.

Four months later all subjects were re-examined. For Company A the mean periodontal scores at the first and second examinations were 0.84 and 0.38, or

a mean difference of 0.46, the equivalent of a 55 percent reduction in periodontal disease. For Company B the mean periodontal scores were 0.94 and 0.89, or a mean difference of 5 percent. For Company C the mean scores were 0.96 and 1.13. The differences in mean scores between the three companies were statistically significant.

The relation between oral hygiene and periodontal disease is close.

MANUAL TOOTHBRUSH NOT OBSOLETE*

Council on Dental Therapeutics. American Dental Association, 222 East Superior Street, Chicago 11, Ill. JADA 68: 279, February 1964. From Dental Abstracts 9(4): 257, April 1964.

Any claim that the manually operated toothbrush is obsolete is exaggerated, misleading and contrary to the public interest.

Data from some studies emphasize the ability of persons to maintain good oral hygiene with a conventional toothbrush if the persons possess reasonable dexterity and know how to use the brush.

Although the Council on Dental Therapeutics has not yet established its program for evaluation of powered toothbrushes, it has informally recognized that certain electrically powered toothbrushes are safe and effective devices for cleaning the teeth.

The Council's further evaluation of electric toothbrushes should assist the dentist in deciding what type of brush will best serve the needs of individual patients. Each electric toothbrush must be evaluated individually.

IS STOPPING THE SALE OF SOFT DRINKS AND CANDY IN SCHOOLS THE ANSWER?*

Millican, Carlene. New York State Department of Health, Rochester, N. Y. Are Candy Sales in Schools Justified. Jour of Health, Phys. Ed. & Recreation. 35(35): 65-67, January 1964. From Dental Abstracts 9(4): 260, April 1964.

Although the American Dental Association, the American Dietetic Association and the Council on Foods and Nutrition of the American Medical Association have all urged that candy and carbonated beverages not be sold on school premises, a close look at the child consumer of today and his environment suggests that banning such sales in schools may not bring about the desired results.

Vending machine sales have increased from \$600 million in 1946 to \$2,586 million in 1960. One effect of the ubiquitous vending machine is to encourage piecemeal eating. Coffee breaks and snacks have become part of the life of today. With the aid of the

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refrigerator, the vending machine and other gadgets we are becoming like the simpler, less organized societies in this custom of frequent, unplanned eating.

Children are growing up in a new tradition. The family doesn't just stop for gas—it stops for gas and pop. A person doesn't just bowl or skate—he skates and eats a hot dog. People now eat and drink when they attend sports events, the theater, concerts, and at home while being entertained by television. People eat and shop in all sorts of stores, even while doing the wash at the corner laundromat.

One sure way of eliminating sweets from the diets of children would be to control the source, but how can nutritionists and health educators take on the soft drink, confectionery and baking industries and the advertising business? Banning the sale of candy in schools would contribute in some degree toward a reduction in caries, but its overall effectiveness is questionable. The alternative is to teach the individual child to make the necessary choice. Children must learn to understand and deal with the many inducements to buy food and drink. Today children are exposed and conditioned to a preference for candy and concentrated sweets long before they enter school. Whether or not schools sell candy, many children will have it. If children are educated in the essentials of nutrition they will be able to make wise choices in their selection of food.

Every child has the right to know what to eat and why, and how it affects his health. Nutrition education should be a planned part of the total school health program. Schools as well as parents share a major responsibility for fitting the child for society and helping him to be responsible for himself and his health. The extent to which both parents and the school recognize the importance of nutrition and dental health education in equipping the child for society is the critical issue. When this issue can be resolved, the question as to whether candy sales in schools are justified becomes unimportant.

PERSONNEL AND PROFESSIONAL NOTES

U.S. Navy Dental Corps Continuing Education Program. The U.S. Naval Dental School, Bethesda, Maryland, continues the series of short postgraduate courses for fiscal year 1965 with "Preventive Dentistry," 19-23 October 1964, and "Endodontics," on 26-30 October 1964.

The course director in "Preventive Dentistry" is CAPT G. H. Rovelstad DC USN. The various aspects of prevention and early control of dental disease will be emphasized. Attention will be focused on the methods of preventing one of the most prevalent of these diseases, dental caries. The causes, pathology, and incidence of the disease, as well as practical methods for its control and prevention are presented.

The course director in "Endodontics" is CAPT J. F. Bucher DC USN. This course consists of lectures,

seminars, and clinical demonstrations of endodontic procedures that may be undertaken at any activity. Attention is given to the etiology, diagnosis, and treatment of pulp and periapical pathosis, surgical and non-surgical management of periapical problems, and management of situations related to other fields of clinical dentistry.

These short courses were established to keep career dental officers of the Armed Forces abreast of current developments in dentistry, in order that they might provide a higher quality of dentistry. Applications should be submitted via district and staff dental officers and should be received in the Bureau as early as possible and, preferably, not less than four weeks prior to commencement of the course. Quotas have been assigned to COMONE, COMTHREE, COMFOUR, COMFIVE, COMSIX, COMNINE, PRNC, SRNC, and CNATRA. Staff dental officers not utilizing assigned quotas should report this information to BuMed, Code 611, one month prior to the convening date of the course. This will allow the Bureau to fill the quota from other districts.

Caries Prevention Treatment. It is a matter of great concern to the Chief of the Dental Division that in quarterly reports, the DD 477, the number of caries prevention procedures on line 42 does not closely approximate the number of prophylaxes on line 40. BY THIS TIME IT SHOULD BE APPARENT TO ALL DENTAL OFFICERS that most prophylaxes accomplished in the Navy should be made with the stannous fluoride special pumice mixture, followed by a topical application of stannous fluoride to all teeth present. The patient should then be encouraged to use a stannous fluoride dentifrice. Evidence is becoming overwhelming that this will materially cut the work load of the Dental Corps.

This three-agent stannous fluoride treatment should be accomplished in one sitting; and each such treatment should be recorded on both lines 42 and 40.

It is recognized that, in some cases, in the professional judgment of the dental officer, other caries prevention treatments will be indicated. All such procedures may be recorded on line 42—MISCELLANEOUS.

Naval Dental Officer Guest Speaker at the First Bi-Regional Conference of State and Territorial Dental Directors. CDR George H. Green, DC USN, Head, Oral Pathology Division, U.S. Naval Dental School, National Naval Medical Center, Bethesda, Maryland, recently participated in a dental public health conference which included the State Dental Directors of Texas, New Mexico, Mississippi, Tennessee, Arkansas, Alabama, Georgia, Louisiana, Oklahoma, and South Carolina, and Florida's Regional Supervisor. At the meeting which was held in Sante Fe, New Mexico on 14-17 July 1964, CDR Green presented a paper on the development of a new and practical diagnostic test

for the detection of dental caries activity. He also discussed the use of the new "Caries Activity Test" as the basis for a practical program for the prevention and control of dental caries and participated in the round table discussions on Oral Exfoliative Cytology, Dental Health Guides for Teachers, In-Service Training for Staff and Other Public Health Personnel, and dentistry for the Chronically Ill and Aged.

Others taking part in the conference included the Honorable Jack Campbell, Governor, State of New Mexico; Ralph S. Lloyd, DDS, Assistant Surgeon General, Chief Dental Officer, U.S. Public Health Service; Quentin M. Smith, DDS, Associate Chief, Division of Dental Public Health and Resources, U.S. Public Health Service; Paul H. Keyes, DDS, Dental Director, Laboratory of Histology and Pathology, National Institute of Dental Research, U.S. Public Health Service, and the Regional Dental Consultants, U.S. Public Health Service.

New Training Courses Made Available to Naval Reserve Dental Officers. Selected short courses at the Naval Dental School previously available only to active duty officers have been made available as training duty for naval reserve dental officers. The two training periods will convene on 19 October 1964, and 8 February 1965, at the U.S. Naval Dental School, National Naval Medical Center, Bethesda, Maryland.

The 19 October period will cover Preventive Dentistry the first week and Endodontia the second week. For the 8 February 1965 period, reserve dental officers may request either Complete Dentures or Oral Pathology the first week (indicate first choice). The second week, all reservists will attend a course on Occlusion. Requests by reserve officers for training are made to respective commandants.

Coincidental with availability of these training courses, the Dental Military Medicine course as authorized by BUPERSINST 1571.4 (series) has been discontinued.

Navy Dentist Heads Armed Forces Dental Group. CAPT F. I. Gonzales Jr., DC USN, the Senior Dental Officer of the Dental Department, NAS, Alameda was recently elected President of the Bay Area Armed Forces Dental Study Group for the ensuing year. The group is composed of dental officers of all the military services in the San Francisco Bay Area. Its purposes are to promote greater understanding between dental departments of the various services and to improve

the professional knowledge of the group by scheduling guest clinicians. The larger activities of all services act as hosts and are responsible for the meetings by rotation. Besides CAPT Gonzales, the following officers were also elected: CAPT C. E. Johnson DC USPHS, Vice President; and LT COL Arthur L. Milbourn DC USAF, Secretary.

Naval Dental School Sends Thirty-Eight Dental Technicians to the Fleet. CAPT A. R. Frechette, DC USN, Commanding Officer, U.S. Naval Dental School, National Naval Medical Center, Bethesda, Maryland, assisted by CAPT R. R. Troxell, DC USN, Head, Enlisted Education Department, presented certificates of training to thirty-eight dental technicians at formal graduation exercises on 19 June 1964. Letters of commendation also were awarded to those with the highest grade averages of the three schools: F. J. Carriger Jr. DT2, Advanced General class of nineteen; F. C. Brown DT2, Advanced Prosthetics class of ten; K. S. Anderson DT2, Basic Repair class of nine. John C. Peterson DT2, received the ninth Thomas Andrew Christensen Award in recognition of his loyalty and devotion to duty. The award perpetuates the heroism of a Navy dentalman during the Korean War. CAPT J. V. Niiranen DC USN, Staff Dental Officer, Headquarters, U. S. Marine Corps delivered the graduation address entitled "Dental Support of the U. S. Marine Corps."

MALARIA CARD FOR INTERNATIONAL TRAVELLERS

WHO Chronicle 18(7): 275, July 1964.

A WHO Expert Committee on Malaria whose report has just been published¹ draws attention to the danger of malaria being reintroduced by international travellers from malarious areas into countries from which it has been eradicated. It recommends that health administrations employ a card which would, with the minimum inconvenience, warn travellers of the danger and provide health authorities with valuable information. The invitation to the traveller to report to a doctor if he has a fever may save his life as well as prevent possible transmission of malaria. Clearly such a card cannot be fully effective. Asymptomatic parasitaemias will escape notice, and many travellers will doubtless make incomplete declarations on the card or fail to report to a doctor.

¹ Wld. Hlth. Org. techn. Rep. Ser., 1964, 272.

- While emotional stress may precipitate and accelerate the course of certain diseases, such as essential hypertension, there is as yet no evidence that it can actually cause them.
- Recent studies carried out on more than 12,000 sera and samples of cerebrospinal fluid suggest that the fluorescent treponemal antibody (FTA) test is destined to become one of the basic serological diagnostic tests for syphilis.



Preventive Medicine

PUBLIC HEALTH SIGNIFICANCE OF ANIMAL SALMONELLOSIS

Los Angeles County Health Index. The Public Health Significance of Animal Salmonellosis, Part I, 23 May 1964, and Part II, 30 May 1964.

Salmonellosis is a worldwide problem in both man and animals. There are over 700 recognized sero-types, nearly all of which have been found in animals. Most of these microorganisms are potential human pathogens. The ubiquity of salmonella commands the attention of both livestock owners and public health officials.

The transmission of salmonella directly from animal reservoirs, and indirectly through food products, to man is widespread and is a problem of increasing importance. Epidemiologic studies show that man may become an asymptomatic carrier of the salmonella organisms found in animals, and thereby become a source for animal infection. It becomes apparent that the control of salmonellosis requires both veterinary and medical public health measures to minimize the transfer of infection.

Data have been derived from a cooperative program between the U. S. Department of Agriculture and the U. S. Public Health Service, Communicable Disease Center. There have been 6,216 cultures of salmonellae (86 different serotypes), isolated from more than 35 different animal species. These include fowls, swine, sheep, goats, cattle, horses, dogs, cats and rodents. Fifteen serotypes comprised 82% of the total cultures.

Salmonellosis in animals generally occurs as an intestinal infection. Under certain conditions, the disease may progress to septicemia. Epizootics and septicemias are more likely to occur in young animals. Chronic, asymptomatic carriers are common and serve to perpetuate the disease and contaminate the environment.

Avian Salmonellosis. At the present time, poultry is the largest known animal reservoir in the United States. The relatively host-specific *S. pullorum* and *S. gallinarum* account for about 2/3 of avian salmonellosis. The ubiquitous *S. typhimurium* accounts for a further 10%-20%. Many other serotypes occur, but represent sporadic isolations, often with no manifest disease. The U. S. Public Health Service Communicable Disease Center has isolated over 50 serotypes from birds.

In poultry, which survive pullorum disease and remain carriers, the infection persists most commonly in

the ovary, resulting in egg yolk infection. Survivors from salmonellosis due to other serotypes usually experience intestinal infection. Where a chronic gall bladder infection develops, fecal excretion of bacteria may persist for 18 months or more. Such infection results in contamination of the egg shell rather than the yolk.

Porcine Salmonellosis. Swine are natural hosts of *S. choleraesuis* and may suffer from acute, subacute, or chronic disease known as swine paratyphoid or necrotic enteritis. *S. choleraesuis* is quite invasive in swine, often resulting in bacteremia. Apparently, healthy pigs may act as carriers.

In addition to being a host to *S. choleraesuis*, swine are second only to fowls in the frequency with which they become infected with serotypes of salmonellae. Twenty-five different serotypes have been isolated by the Communicable Disease Center. Mixed infections are relatively common.

Bovine Salmonellosis. Salmonellae affect cattle of all ages, the infection occurring as sporadic dysentery syndrome, occasionally resulting in signs of septicemia and intoxication. The disease in calves often spreads rapidly and is characterized by septicemia.

Animals who have recovered from the illness often excrete salmonellae in their feces intermittently or regularly for long periods, and even for life. Inapparent or subclinical infection can also result in a carrier state. The persistence of these bacteria in manure is remarkable. *S. dublin* has been viable in dried feces after three years and *S. typhimurium* has survived in water, pasture, and feces for periods of from 4 to 28 weeks.

S. dublin is particularly adapted to cattle and has been found in many parts of the world. In the United States this organism seems to occur only in the West. Other serotypes of consequence in cattle are *S. typhimurium*, *S. newport*, *S. enteritidis* and *S. anatum*.

Ovine and Caprine Salmonellosis. The incidence of salmonellae in clinically normal sheep and goats appears to be low. In addition, there is apparent rarity of salmonella dysentery. The cases that do develop are usually related to predisposing factors.

Equine Salmonellosis. The horse is quite susceptible to the relatively host-specific *S. abortus equi* which causes abortion. This organism has seldom been isolated from other animal species. Occasionally, sporadic cases of dysentery in horses, associated with other serotypes have been reported.

Canine and Feline Salmonellosis. Surveys of dogs and cats show a varying incidence of salmonellae isolations. Out of 51 cultures, the U. S. Public Health Service Communicable Disease Center isolated 23 different serotypes. A Los Angeles County survey, in 1948 and 1949, revealed positive cultures from 16 of 259 dogs and one of 75 cats. Most of those animals showed no illness. These animal carriers are a potential source of spread of salmonellosis to man and to other animals.

Rodent Salmonellosis. A high incidence of *S. typhimurium* and *S. enteritidis* among rodents has been demonstrated. Although rats and mice have a lower incidence of other serotypes, they may become infected with a wide variety of salmonellae.

In general, every animal species is a potential source of salmonella infection until proven otherwise by thorough investigation. Salmonellae have been isolated from practically every animal species thus far investigated.

Humans who must attend to farm livestock or pets should realize the potential risks of close contact with infected animals. Feces, milk, dust and other material may be heavily contaminated. Personal hygienic precautions are essential.

ANTIMONY POISONING—ILLINOIS

Samuel L. Andelman, MD, MPH, Morbidity and Mortality Weekly Report, Antimony Poisoning—Illinois, 13(29): 250, 24 July 1964.

A group of 35 pre-school age children all experienced vomiting from 35 to 45 minutes after drinking a raspberry flavored beverage at a Chicago Sunday school Halloween party. Some children also became pallid, others dizzy. There were hospitalized for less than 24 hours. No fatalities occurred.

Only this drink and potato chips were served. Because of the rapid onset of symptoms, the premises were carefully inspected for evidence of insecticides, rodenticides, and other toxic materials. None was found. The investigators learned that the beverage had been prepared by mixing the contents of several packages of the raspberry powder with sugar and water in an old porcelain roasting pan, and then refrigerated for 40 hours prior to serving. No trace of chemical could be found in the powder concentrate or in the potato chips. Antimony was detected in the small quantity of remaining beverage and from acid washings of the pan; insufficient quantity remained for quantitative analysis. Accordingly, the Chicago Board of Health laboratory workers repeated the entire procedure, using the same roasting pan; 2.8 mg. percent antimony was detected.

Editor's Note: Antimony is often contained in the binding between the enamel and metal, especially in older utensils. Apparently, the citric acid partially dis-

solved the binding behind the pan's worn enamel coat, thus releasing sufficient antimony to cause the symptoms experienced by the children.

STUDIES ON MALARIA AND ANOPHELES BALABACENSIS IN CAMBODIA

Don E. Eyles, R. H. Wharton, W. H. Cheong and McWilson Warren, Bulletin of WHO, Studies of Malaria and Anopheles balabacensis in Cambodia, 30(1): 7, 1964.

During the past few years *Anopheles balabacensis* has come to be recognized as a very important human malaria vector in Thailand and the Indochinese area, but little has been published on its bionomics except from North Borneo.

Studies of the feeding habits of *A. balabacensis* in Cambodia showed it to be predominantly a forest mosquito. It was readily attracted to monkeys in the forest canopy but also readily attacked man on the ground. Very few of this species were attracted to domestic animals. Malaria infections were found more frequently in mosquitos captured in villages, but a significant number were infected from the forest beyond flight range of human habitation.

The human population showed a high percentage of persons infected with malaria, *Plasmodium falciparum* predominating. Cambodian monkeys were found also to be infected with *P. cynomolgi*. Although none of thirteen monkeys injected with sporozoites from wild-caught mosquitos came down with malaria, it was concluded that *A. balabacensis* probably was the vector of both human and monkey malaria and that the risk of cross-infection was considerable if monkey malarias infective to man exist in the area. (Editor's Summary)

A SAFE METHOD OF EXTRACTING SCORPION VENOM

WHO Chronicle, 17(10): 383-384, October 1964.

The preparation of scorpion antivenin requires large quantities of venom, which must be extracted with the smallest possible risk for the technicians. The results of a study on methods for maintaining scorpions in the laboratory and the electrical stimulation of the venom glands are described in a recent number of the Bulletin of the World Health Organization, Vol. 28, page 505, 1963.

The scorpions were kept in large jars (sometimes as many as 20-25 in a single jar) containing sand and pieces of board and bark which they could use as hiding-places. Each jar was supplied with water by means of a Petri dish that could be filled without opening the jar. The scorpions were fed with crickets at the rate of one cricket each per week.

To anesthetize the scorpions, CO₂ was introduced into the jars; this was usually effective within 3 to 5 minutes. Each scorpion was then placed in a specially

modified mousetrap, only the telson and 1 or 2 terminal segments protruding beyond the cross bar of the trap. Next, two electrodes were applied to the postabdomen of the scorpion. Under this stimulation the venom was usually emitted immediately, a glass microscope slide being used to collect it. The scorpion was then released from the trap and transferred to a holding jar to await return to the original colony. It was possible to collect venom from as many as 400 scorpions on a single slide. The pooled venom could then be dried and preserved.

This method made it possible to maintain a laboratory colony of over 5,000 live adult scorpions and study the secretion and composition of the venom.

As much as 66.4% of the venom content of the telson could be obtained by electrical stimulation. The quantity of venom secreted varied according to the size of the animal, the largest quantity (0.48 mg) being obtained from *Leiurus quinquestriatus*, a specimen from Israel, and the smallest (0.075 mg) from *Centruroides noxius*, which is found in Mexico and was the smallest species studied.

ROCKY MOUNTAIN SPOTTED FEVER— VIRGINIA

*Commonwealth of Virginia Dept. of Health, Morbidity
Rept. for week ended June 27, 1964.*

As of the week ended June 27, 1964 a total of 11 cases of Rocky Mountain spotted fever has been reported in Virginia thus far in 1964. During the same period in 1963, reported cases totaled 8.

During the 10-year period (1954-1963), a total of 416 cases was reported in Virginia. Cases totaled 207 during the first 5 years of this period (1954-1958) and 209 during the last 5 years (1959-1963). During this 10-year period, cases were reported during each of the months of the year with the peak months, July and August showing 99 cases each. Thirty cases were reported during May; 76 during June; 58 during September, and 23 during October. During the ten year period, males accounted for 216 cases; females—197 cases. During the first five years (1954-1958) male cases totaled 111; females, 96; for the second five years (1959-1963) male cases totaled 105, females, 101. During the ten year period, 240 cases were under the age of 20 years, 173 were 20 years or older. This ratio was 116:91 during 1954-1958 and 124:82 during 1959-1963. During the first 5 years, of the age group less than 20 years, 55 cases were females, 61 were males; the ratio for the last 5 years is 63 females to 61 males.

KNOW YOUR WORLD

Did You Know?

That a shipment of 400,000 doses of typhoid vaccine recently was sent to Bahia region in Brazil?

A team of U. S. Public Health Service technicians assisted in dispensing the vaccine. The vaccine was a donation by a Philadelphia drug manufacturer to the 100,000 flood victims in Brazil. (1)

That in the widely publicized typhoid epidemic in Zermatt, Switzerland, in March 1963, which resulted in 450 cases and 3 fatalities, many changes have been made at the resort?

The two most important changes in sanitation were the incineration of garbage and erection of water purification stations. This season their guest registry showed an increase of 10% in visitors. (2)

That a total of 295 cases of tetanus were reported in 1961 in the Central Province of Kenya?

The wearing of shoes is an important factor in the prophylaxis of this disease because most of the infections came from injuries to the feet. (3)

That four babies, aged 5 months to 11 months are developing normally, both physically and mentally, although fathered by frozen sperm?

A Philadelphia researcher of the Albert Einstein Medical Center, Philadelphia, reported to the meeting of American Society for the Study of Fertility, in Bar Harbour, Florida, that the freezing technique could be useful in establishing human sperm banks and possibly in the treatment of human infertility caused by low sperm count. Fresh human spermatozoa had been preserved up to 5½ months by freezing at —321° F in liquid nitrogen. After thawing, there was no significant change in the sperm count. (4)

That in 1963, about \$356,323, or nearly 54% of the total claim disbursements of the Metropolitan Life Insurance Company were for deaths attributed to cardiovascular-renal diseases? (5)

That 23 of the 51 deaths that occurred during a 10-year period among employees of the small fluorspar mining community in St. Lawrence, Newfoundland, have been due to primary lung cancer?

The outstanding environmental factor in the fluorspar mines was the discovery of concentrations of radon and daughter products in the air, well in excess of the suggested maximum permissible concentrations. On the basis of these concentrations and other considerations, it is suggested that underground workers were probably exposed to an average potential alpha-energy between 2.5 and 10 times the previously suggested working level of 1.3×10^5 Mev per liter of air. (6)

That 10 hours before her death from rabies, a 7-month pregnant woman was delivered by caesarean section of a live male child?

The child was free from infection and has remained well for 2½ years. (7)

That 13 cases of leprosy were found in the village of Kfar Zacharia, Israel, a village founded 10 years ago by immigrants from Iraq?

After a survey of 500 residents, 3 proven cases and 11 suspected cases of leprosy were found, one new case being an 18-month-old child. It is assumed that the focus of the disease was probably implanted or imported. (8)

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1. JAMA 189(2): 176, 13 July 1964 (Canad J Publ Hlth 55: 133 March 1964).
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3. J Trop Med Hyg 67: 5 Jan 1964.
4. Science News Ltr, 85(24): 376, 13 June 1964.
5. Metropolitan Life Insurance Statistical Bull, 45: 8, March 1964.
6. JAMA 189(6): 527, 10 August 1964 (Brit J. Indus Med 21: 94 April 1964).
7. Trop Dis Bull 61(6): 562, June 1964 (J Philipp Med Assoc 39(10): 765-767, October 1963, 3 figs.)
8. JAMA 189(3): 250, 20 July 1964 (Harefuah 66: 88, 1 February 1964).

A WORD OF WARNING ABOUT TULAREMIA

Googins, John A., MD, *The Monthly Bull., Indiana State Board of Health, November 1963.*

Tularemia is often referred to as rabbit fever, indicating long association of the disease with wild rabbits. However, many other animals may harbor this infection, such as woodchuck, muskrat, opossum, squirrel and skunk. Studies of human cases of tularemia nearly always show that the victim was in contact with a wild rabbit.

Tularemia, in both animals and man, is caused by a bacterial agent. One of the outstanding characteristics is the ease with which infection takes place. It is passed from animal to animal in nature by certain bloodsucking insects such as ticks, lice, flies and perhaps fleas. Tularemia may spread from its normal animal association to humans through the bite of the wood tick, dog tick and the blood sucking deer fly. Actual contact of the human and infected animal apparently accounts for most of the cases of tularemia.

A frequent story given by the tularemia patient is that several days before he became sick, he had cleaned a wild rabbit. During the process a spicule of bone often scratches or punctures the skin of the hand which usually is smeared with the blood of the animal. It is not always necessary that the skin be penetrated by a bone before the disease can be acquired. A scratch or any break in the skin may allow ready access to the tularemia bacteria. In some cases there is apparently penetration of the unbroken skin. The germ is so

versatile that it may enter the body in ways other than through the skin. A blood smeared hand may introduce the organism into the eyes. Inadequately cooked meat from a wild animal may allow infection via the intestinal tract. Water taken from a stream or spring contaminated with tularemia bacteria may also cause clinical infection.

Symptoms of tularemia in man begin about 2 to 7 days following the bite of the germ-carrying-insect or exposure to the diseased animal. The illness has a rapid onset, accompanied by chills, fever, headache, vomiting, body pains, sweating and prostration. Commonly, an ulcer forms at the portal of entry of the organisms through the skin, with ipsilateral, painful epitrochlear and axillary lymphadenopathy. Fever is quite often high throughout the course of the disease and may persist at levels of 102° to 104° F. for several weeks. Tularemia of gastrointestinal origin may produce symptoms resembling typhoid fever, which may be quite severe. Recovery is generally slow, taking from 3 to 6 months for complete recovery.

The treatment of tularemia is made easier by several antibiotics. Nevertheless, the disease is still capable of producing prolonged illness and prostration. Untreated cases of tularemia have a death rate risk of about 5%.

In view of the seriousness of tularemia, each person whose work or recreation brings him into contact with wildlife should know the following practical protective measures to be followed:

1. Avoid taking animals that appear sluggish, an animal found dead or one which has been brought in by a dog or cat. Sluggish or slow moving animals may have tularemia and there is no way of knowing what disease killed the animal found dead.
2. Clean wild game with caution! Rubber or plastic gloves worn during the cleaning process provide excellent protection, provided they are not torn or punctured by bone fragments. Avoid splashing the blood of the animal. Keep the hands away from the eyes. Use liberal amounts of soap and water to cleanse the hands and arms following cleaning. This warning also applies to the housewife who may prepare game for the table after it has been refrigerated.
3. Discard by burning or burying any game having white or yellow spots on the liver or other viscera, or enlarged glands in the neck. If the spots or enlarged glands are not found, it is still possible that the animal may have tularemia and must be handled with caution.
4. Immediate soap and water cleaning and disinfection of bites, cuts, scratches and punctures should be practiced.
5. Avoid the bite of insects such as the tick or deer fly which may transmit the disease, and avoid deliberate handling and squashing of these insects.
6. Cook all wild game thoroughly, not allowing any red juice to remain in the meat or about the bones.
7. Avoid drinking raw water, even though crystal clear and remote from civilization.

The precautions listed here, if followed with care, will do much to prevent the serious disease tularemia from producing an unfortunate ending to many of the hunting trips this fall.

OPERATION AND CONTROL OF WATER TREATMENT PROCESSES

By Charles R. Cox, Geneva, 1964, 379 pages (*World Health Organization: Monograph Series, No. 49*). WHO Chronicle, 18(7): 278, July 1964.

The publication by WHO of *International Standards for Drinking-Water* was part of a programme to help countries improve the quality of their water supplies. The adoption of these standards is of little use, however, if the treatment processes employed are not efficient and the operators not sufficiently skilled. In recognition of the need for an authoritative guide to water treatment, WHO has now published a monograph bringing together a body of recent information on water treatment and control. The style of presentation is adapted primarily to the needs of plant superintendents, operators, and laboratory personnel, but public health officials and all concerned with maintaining a suitable system of controls will find much in the monograph to interest them. Sufficient theory is presented to provide a basic understanding of the processes described, but the main emphasis is on practical operating problems. The monograph does not aim at presenting standards of design—although designers will find a great deal of value to them—but rather seeks to show how to get the most from a plant already built.

The processes described are intended solely for the treatment of water for domestic purposes; the treatment of water for industrial use is not considered. It is recognized that the limits of effectiveness of the various processes impose a restriction on the quality and character of raw waters capable of being treated satisfactorily. This makes it necessary to prevent pollution of natural water resources reaching a level where they can no longer be treated reliably and economically for the production of potable water. To this end, water supply officials should co-operate closely, with water pollution control authorities. The storage of water in impounding reservoirs also needs careful control to ensure the creation of favorable conditions for self-purification and to prevent deterioration in water quality.

Among standard treatment procedures discussed are aeration, taste and odor control, coagulation and flocculation, sedimentation, filtration, and chlorination. Standards of potable water quality are summarized, with special reference to the prevention of water-borne diseases. The arguments for and against the fluoridation of water supplies as a dental health measure are briefly reviewed and full details are given of the practical aspects. Information is included on corrosion control, the removal of iron and manganese, and the

softening and demineralization of water. Some administrative aspects of water treatment also receive attention, such as the keeping of adequate records and the qualifications, training, and utilization of personnel. The usefulness of the monograph as a guide for water treatment engineers is further heightened by the inclusion of a number of annexes containing relevant data, and a supplement on laboratory procedures. All measurements are given in both US and metric units.

U. S. PRESIDENT PLEDGES SUPPORT FOR INTERNATIONAL TUBERCULOSIS WORK

WHO Chronicle, 18(7): 279, July 1964.

On the occasion of the 1964 observance of World Health Day, Lyndon B. Johnson, President of the USA, sent the following message to Dr. Abraham Horwitz, WHO Regional Director for the Americas:

Tuberculosis, a disease that has plagued mankind since the dawn of history, is still very much with us. Each year, more than 50,000 cases are reported in the United States, at least 175,000 cases in the Western Hemisphere and millions around the globe.

Science has given us powerful weapons with which to fight the disease. But these weapons must be applied with unceasing dedication and advances must be made in living standards for all people, if the world is to win its long struggle with tuberculosis.

Thus the theme for this year's World Health Day observance on April 7, 1964, "No truce for tuberculosis", is particularly fitting. I pledge the wholehearted co-operation of the United States in worldwide efforts to reduce the toll of this ancient enemy of man.

LOCAL TREATMENT OF RABIES-INFECTED WOUNDS

WHO Chronicle, 18(7): 267, July 1964.

Prompt local treatment of all wounds inflicted by rabid animals—and in particular of superficial bites—is often decisive in blocking the spread of rabies virus to the central nervous system, and indeed may even kill the virus on the spot. The value of this first aid method does not appear to have been fully appreciated as yet.

Together with studies on the prevention of rabies by vaccination and serotherapy, the results of research on the local treatment of rabies-infected wounds have frequently been published in the Bulletin of the World Health Organization over the past few years. Further studies in this field are reported in three papers in a recent issue.

The authors of the first paper¹ once again stress the value of promptly washing scratches, lacerations, or superficial bites inflicted by rabid animals with tap water and soap or water to which a suitable chemical substance has been added, or of swabbing or washing

them with antirabies serum. These measures can appreciably reduce the risk of rabies infection, and are particularly important if there is any delay in the arrival of a doctor. To obtain experimental proof of the effectiveness of such local treatment, the authors inoculated guinea-pigs and rats with rabies virus. The animals were treated at varying intervals of time after inoculation and by different methods, and there was an untreated control group.

The statistical analysis of the results leaves no doubt as to the effectiveness of the local application of certain substances. Local anaesthetics in oil (particularly procaine hydrochloride and dibucaine hydrochloride) and benzalkonium chloride interfere with motor function and have a marked protective effect. Benzalkonium chloride seems both to have a blocking effect and to kill the virus on the spot. It is known that virus injected intramuscularly in animals diminishes rapidly in titre, but may remain viable at the site of inoculation for 49-96 hours. Accordingly, blocking agents may impede the transmission of virus up the nerve trunk long enough to allow the virus titre to drop below the infectious threshold. The study of this blocking effect and its mechanism is continuing.

The second article² describes trials of the effectiveness of quaternary ammonium compounds, ethyl alcohol, local anaesthetics, antihistamines, and tranquillizers in preventing the spread of rabies virus in mice infected by intraplantar inoculation. Only certain quaternary ammonium compounds and ethyl alcohol appear to inhibit the spread of the virus. Although the exact mech-

anism of action of these substances has not yet been elucidated, it is possible that, in the case of quaternary ammonium compounds, inactivation of the virus occurs at the point of injection and in its immediate neighborhood, for the six compounds—out of 16 studied—that were found to be effective *in vivo* were also those that inactivated the virus *in vitro*. The mode of action of ethyl alcohol seems to be much more complex, since a concentration with no virucidal action *in vitro* proved remarkably active *in vivo*. Moreover, the mice that survived developed an appreciable degree of immunity. Further studies will be conducted into these findings.

Finally, a study of the effectiveness of locally inoculated antirabies serum and gamma globulin in mice infected by intraplantar injection³ gave the following results: antirabies serum and, to a lesser extent, gamma globulin exert a protective action when injected at the same point as the rabies virus, one hour after infection. Some protection is also apparent when inoculations are made up to three hours after infection, but none could be demonstrated when there was a six-hour interval. A prophylactic injection in the opposite paw one hour after infection seems to have afforded a certain degree of protection, but a similar injection six hours after infection had no effect.

¹ Dean, D. J., Baer, G. M. and Thompson, W. R. (1963) *Bull. Wld Hlth Org.*, 28, 477.

² Wiktor, T. J. and Koprowski, H. (1963) *Bull. Wld Hlth Org.*, 28, 487.

³ Kaplan, M. M. and Paccaud, M. F. (1963) *Bull. Wld Hlth Org.*, 28, 495.

MEETING OF WHO REGIONAL NURSING ADVISERS

Nursing Advisers from each of the six Regional Offices of WHO met in Geneva from 7 to 15 July 1964 to consider a study of the WHO nursing programme and the ways in which it can most effectively contribute towards the realization of the Organization's aims.

Dr. Ruth Freeman, Professor of Public Health Administration, School of Hygiene and Public Health, Johns Hopkins University, USA, who acted as consultant during the study, also attended the meeting, to which the Nursing Advisers brought first-hand information on developments in nursing in Member States, major problems, and suggestions for the kind of assistance needed from WHO. Consideration was given to the need for research in nursing and it was emphasized that countries should train selected nurses in research methods.

Other items discussed included the approval of a technical policy on nursing that will serve as a guide for WHO staff members, the nursing aspects of national health planning, recruitment, and opportunities for the professional development of nursing staff.

MEDICAL EDUCATION IN DEVELOPING COUNTRIES

An Inter-Regional Conference on the Establishment of Basic Principles for Medical Education in Developing Countries was held from 7 to 12 September 1964 at WHO Headquarters, Geneva. It was attended by 24 participants from countries in the six WHO Regions that either give or receive assistance in medical education. Observers from other UN specialized agencies and from other interested organizations were present.

The Conference was arranged because experience over some years has indicated that the instruction given in medical schools in developing countries is often based on principles that seem to be at variance with the purpose for which the schools were established.

It is hoped that the Conference will enable countries and organizations giving assistance in medical education and related programmes to reach a common basis of understanding on the steps to be taken in establishing programmes of medical education in developing countries, including ways of assessing needs, formulating objectives, designing programmes, and selecting and adapting methods.



Reserve Section

ACDUTRA ORDERS ARE STANDARDIZED

The Naval Reservist, NavPers 15653, July 1964.

Your orders to Active Duty for Training (ACDUTRA) have a new look.

A form for ACDUTRA orders has been devised to standardize order writing and to simplify pay procedures. Several forms which have been in use and reproduced in the field have been consolidated into a single standard form which is stocked in the central supply system. The new form provides for the computation of pay, allowances, and travel on the reverse side of the ACDUTRA orders.

The form, ACDUTRA ORDERS & PAY VOUCHER, NavPers 4033/NavCompt Form 2120, consists of a carbon-interleaved pad which provides copies required for disbursing and record purposes, plus a hecto master for information copies.

The carbon set must remain intact until processed for payment. Disassembly and distribution of carbon copies will be made by the finance office.

NEW HOSPITAL CORPS DIVISION

The Naval Reservist, NavPers 15653, July 1964.

Hospital Corps Division 1-2, NRTC Pawtucket, R. I., was recently commissioned. The mission of the new unit is to train hospital corpsmen and dental technicians. Included in its program is the training of Waves—not only in the conventional nursing skills but also in the concepts of environmental health sciences.

AMERICAN COLLEGE OF SURGEONS

A sectional meeting of the American College of Surgeons will be held in Chicago, Illinois, at the Conrad-Hilton Hotel, during the period 5-9 October 1964. Naval Reserve Medical Department officers who attend approved sessions of this meeting are authorized to be granted one retirement point per day, provided they register their attendance at the registration desk for Naval Reservists.

BUMED INSTRUCTION 1001.1B 5 August 1964

Subj: Utilization of inactive Naval Reserve Medical Department officers as consultants without pay

Ref: (a) H4207, BUPERS Manual
(b) H2202, BUPERS Manual

1. Purpose. To provide information concerning utilization of eligible inactive Naval Reserve Medical Department officers as consultants at naval and Marine Corps activities in an appropriate duty without pay status. The previous policy to utilize Medical Corps and Dental Corps officers for this purpose is expanded herein to include Medical Service Corps and Nurse Corps officers.

2. Cancellation. B U M E D Instruction 1001.1A (NOTAL) is canceled.

3. Definition. Eligible inactive Naval Reserve Medical Department officers may, with their consent, be ordered in an appropriate duty without pay status to serve at naval and Marine Corps activities as consultants. Their duties shall include, but not be limited to, those of the following:

a. Participate in staff conferences, clinical lectures, journal club meetings, clinical pathological conferences, and formal ward rounds.

b. Clinical consultant to chiefs of services, or heads of departments, in unusual cases, as required.

c. Consultant-lecturer to assist in training programs.

4. Professional and Military Standards. Consultants should be outstanding specialists in their community and diplomates of a board where appropriate. Naval reservists in the following categories are not eligible for appropriate duty orders:

a. On the Inactive Status List.

b. Retired with, or without, pay.

5. Limitations. In accordance with reference (a), each period of appropriate duty must be at least 2 hours in duration and shall not exceed the following:

Total periods per year ----- 48

Quarterly maximum ----- 13

Monthly maximum ----- 5

NOTE: This Instruction continues with *Application and Assignment, Orders to Appropriate Duty, Termination and Renewal of Assignments, and Reports*.

- The number of deaths from heat illness during the Mecca Pilgrimage has declined steadily from more than 450 in 1959 to 4 in 1963 and none at all in 1964, while no cases of quarantinable disease among the pilgrims have been reported for several years.
- There are two schools of thought concerning the use of the term "psychosomatic". One uses it to describe certain disorders in which psychological factors play a major role, while the other maintains that it applies to the whole field of medicine. In the opinion of a WHO Expert Committee on Mental Health, these points of view are not necessarily irreconcilable.
- From tests of two types of measles vaccine in Western Nigeria, it appears that the Schwarz vaccine "is likely to be the vaccine of choice in protecting the West African child against measles". An advantage of this vaccine is that it does not have to be combined with immune serum.

NEURO-ENDOCRINOLOGY AND REPRODUCTION

A WHO Scientific Group on Neuro-endocrinology and Reproduction in the Human met in Geneva from 8 to 14 September 1964.

Neuro-endocrinology is a rapidly developing science, of particular importance for the understanding of human reproduction. The Scientific Group's discussions covered normal and abnormal aspects of the physiology of reproduction, with special reference to lesions, both neoplastic and traumatic.

PROTEIN-CALORIE MALNUTRITION IN AFRICA

An inter-regional seminar on advances in the prevention and treatment of protein-calorie malnutrition in infants and children will be held by WHO in Kampala, Uganda, from 7 to 18 September 1964. The participants will be English-speaking paediatricians, maternal and child health specialists, and public health physicians from countries of Africa belonging to the African and Eastern Mediterranean Regions.

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